DETAILED ACTION

Response to Arguments

Response to Arguments mailed on 6/17/2009-8/13/2009

1. Applicant's election without traverse of Group III, Specie I in the reply filed on 8/13/2009 is acknowledged.

2. Claims 1-7 and 20-25 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 8/13/2009.

3. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Response to Arguments mailed on 1/30/2008

1. Applicant's arguments filed 1/30/2008 have been fully considered but they are not persuasive.

Applicant argues that:

With respect to claim 24 of U.S. Patent No. 6,571,221 to Stewart et al. (hereinafter "the '221 patent"), independent claims 1, 9, 20, 26, and 44 recite the additional and different limitation of"identification information" that identifies a specific VLAN or network service provider among a plurality of possible VLANs and network service providers, which is not disclosed in the '221 patent or recited in claim 24 of the '221 patent. Consequently, independent claims 1, 9, 20, 26, and 44 patentably distinct from claim 24 of the '221 patent.

Claim 24 of the '221 patent recites that the access point receives a digital certificate from a portable computing device, which provides sponsorship information of the mobile user. This sponsorship information is used to compute access charges. Thus, the sponsorship information is information with respect to the mobile user. The access point does not select any VLAN or network service provider based on the sponsorship information in any manner.

The "sponsorship information" recited in claim 24 of the '221 patent completely differs from the "identification information" recited in independent claims 1, 9, 20, 26, and 44 of the present application. They identify different matters

and are used differently and for different purposes. It would not be obvious to one skilled in the art to derive the usage of the identification information of the present application from the sponsorship information of the '221 patent. Therefore, independent claims 1, 9, 20, 26, and 44 of the present application are patentably distinct from claim 24 of the '221 patent.

With respect to claims 1 and 13 of U.S. Patent No. 5,835,061 to Stewart (hereinafter "the '061 patent"), again, independent claims 1, 9, 20, 26, and 44 recite the additional and different limitation of "identification information" that identifies a specific VLAN or network service provider among a plurality of possible VLANs and network service providers, which is not disclosed in the '061 patent or recited in claims 1 and 14 of the '061 patent. Consequently, independent claims 1, 9, 20, 26, and 44 patentably distinct from claims 1 and 13 of the '061 patent.

Claim 1 of the '061 patent recites that the access point detects a beacon signal transmitted by a portable computer, and the beacon signal includes a unit ID used to identify the portable computer. Thus, the beacon signal provides information about the portable computer, not about any VLAN or network service provider. Similarly, claim 13 of the '061 patent recites that the mobile unit conveys a unit ID to one of the access points, and the unit ID identifies the mobile unit. In both claims 1 and 13 of the '061 patent, there is no concept regarding selecting one VLAN or network service provider among a plurality of possible VLANs or network service providers based on identification information sent by the mobile unit that identifies the desired VLAN or network service provider. Instead, the unit ID identifies the mobile unit.

In fact, both the '221 patent and the '061 patent focus on a different aspect of the wireless network from the one of the present application. Briefly, both the '221 patent and the '061 patent focus on providing an access point among a plurality of access points to a mobile unit based on the geographic location of the mobile unit. In contrast, the present application focuses selecting a VLAN or network service provider among a plurality of VLANs or network service providers, and each access point is capable of interaction with multiple VLANs or network service providers.

Examiner respectfully disagrees:

Stewart (‘221) clearly states that "identification information may take any of various forms. In one embodiment, the identification information comprises a MAC (media access controller) ID which is comprised on a wired or wireless Ethernet card of the personal computing device used by the user" (col. 13 lines 54-63), therefore the MAC address of a device.

Stewart (‘061) clearly states that “In one embodiment, when a beacon signal output from the mobile unit 5 is detected and received by AP 10, information in the beacon signal identifying the mobile unit is transmitted back to network 15. The information sent back to network 15 includes the identification number of the mobile unit 5 and AP 10, thereby identifying both the user and his location in the network” (col. 5 lines 39-50). Again, Stewart (‘221) and Stewart (‘061) state that the identification information comprises an identification number, thus a MAC address.

Therefore, the identification information comprises a MAC address which is identification information to uniquely identify a mobile unit or a user. It was well known to one of ordinary

skill in the art at the time of the invention to use a MAC based (thus user based) VLANs. Such technologies were well available in 97 by companies such as 3com. The document titled "The 3Com VLAN Approach within the ONcore Switching system" clearly shows on page 10 in the section titled "MAC-based (User-based) VLANs the usage of MAC addresses, the identification information, to be used to identify the VLAN (see 3Com; page 10 "MAC-based (User-based) VLANs; "VLANs to be formed by the grouping of MAC addresses"). Therefore, applicant's arguments are irrelevant.

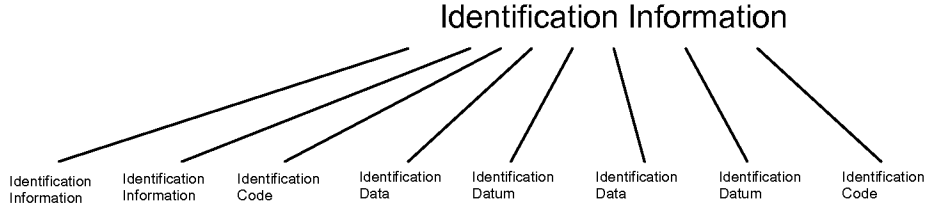
Applicant Argues that:

The phrase "identification information" is very generic. Any data that may be used to identify something or someone may be referred to as identification information. Thus, within different context, the term may have different meanings. For example, a driver license number is one type of identification information to a person, and a MAC address is one type of identification information to a network device. Although both the driver license number and the MAC address may be referred to as "identification information", they identify different entities and are used in different manners and for different purposes. In other words, although both are considered "identification information", a driver license number is generally not equivalent to a MAC address.

Examiner respectfully disagrees:

Examiner agrees that the phrase "identification information" is a very generic phrase. Furthermore, "identification information" is more generic than an "identification code" (information can be a plurality of codes while a code is the most granule form of identification). Therefore, in the rejection any plurality of data that may be used to identify something or someone is referred to as identification information. For example, an "identification code" is a subset of "identification information" since "identification information" comprises at least one or more "identification code". Take it a step further and once can say that a subset of "identification information" (i.e. VLAN information is identification information which is a subset of "identification information") is a portion of a set of "identification information" (i.e. the overall identification information). Applicant

uses the example of a driver's license number and a MAC address to distinguish between "identification code" and "identification information" and labeling both, individually, as "identification information". Examiner respectfully disagrees with the applicant's argument as both a license number and MAC address are the most granule forms of identification. For example, a license number identifies a user in a singular way and not multiple ways and a MAC address identifies a user in another singular way and not in multiple ways. Therefore a license number and MAC address each, individually, are identification codes and together comprise "identification information". A group of identification codes comprise identification information. Therefore, by using a license number in conjunction with a MAC address one has identification information. Since a license number and MAC address are both "identification codes". In the instant case the claims refer to identification information. Identification information comprises an identification code since it is a subset of identification information which comprises one or more identification codes. Therefore, the "identification code" of Stewart falls within the scope of "identification information" of the instant application. Furthermore, since VPN tags are identification information which is a subset of the identification information. For the reasons above mentioned applicant's arguments are irrelevant.



Applicant Argues that:

With Stewart, the identification information, or more precisely the identification code, identifies a specific user. Stewart specifically states, "Such an identification code allows recognition of a user before providing access to system services, thereby providing a measure of security and a service billing mechanism." (See Stewart, col. 3, lines 60-63.) Stewart also states, "according to the invention, system software could be programmed to provide service gates in which a user identification code is compared with a list of authorized codes for access to the particular service." (See Stewart, col. 5, lines 12-15.)

Stewart also discloses another type of identification information, which identifies a mobile unit associated with the user. Stewart states, "The information sent back to network 15 includes the identification number of the mobile unit 5 and AP 10, thereby identifying both the user and his location to the network." (See Stewart, col. 5, lines 43-47.) Stewart also states, "Such a response could be either a simple presence indication causing the AP 10 to transmit a further inquiry message requesting the mobile unit's identification information. Alternatively, in response to an AP scan, the mobile 5 could transmit its identification data immediately." (See Stewart, col. 5, lines 60-65.) Although not explicitly stated, it appears that both the identification code and the identification information may refer to the same data.

Thus, within the context of Stewart's system, the identification information identifies a user or a mobile unit associated with the user. The network or access point uses the identification information to authenticate the user or the user's mobile unit in order to determine the type of service that may be provided to the user. Regardless of whether the user identification information and the mobile unit identification information refer to the same piece of information or two different pieces of information, Stewart's identification information & with respect to the user and the user's mobile unit and is used to identify the user or the user's mobile unit.

In contrast, within the context of the present application, the identification information identifies one VLAN or one network service provider among a plurality of possible VLANs or a plurality of possible network service providers. The access point disclosed in the present application is capable of interacting with multiple VLANs or network service providers. A portable computing device communicates to the access point which one of the multiple possible VLANs or network service providers it desires by providing to the access point the identification information that identifies the desired VLAN or network service provider. The access point uses this identification information to pick out the desired VLAN or network service provider among the multiple possible VLANs or network service providers.

Stewart's identification information cannot be used to pick out one VLAN or network service provider from a plurality of possible VLANs or network service providers, because Stewart's identification information identifies a user or a mobile unit, not a VLAN or a network service provider. Therefore, Stewart does not disclose any form of identification information that may be used to identify a VLAN or network service provider among a plurality of possible VLANs or network service providers, as recited in the independent claims of the present application. Consequently, independent claims 1, 9, 20, 26, and 44 are patentably distinct from Stewart.

Examiner respectfully disagrees:

Examiner respectfully requests that appellant distinguish, somehow, between “Stewart” the reference and “Stewart” the appellant.

A definition of a network service provider is an information service provider (ISP). Stewart (‘061) clearly states that a “service and information provider 20” is a network service provider of the instant application. Stewart ('061) discloses that "a plurality of information provider are connected to the network" (col. 3 lines 18-22), “by way of example and not limitation, service and information providers 20 may include car rental agencies, hotel, restaurants, airline reservation centers, banks, taxis services, bus and train reservation offices, printing services, on-line database service, message services,

and e-mail providers" (col. 6 lines 39-49). Furthermore, “information provider" is referred to as “service and information provider 20” (col. 7 lines 21-23, col. 7 lines 31-34, col. 7 lines 45-49). Therefore, since "one or more information providers 20 are coupled to network 15" (col. 5 lines 51-55) and that “information providers 20” are “service and internet provider 20” (col. 7 lines 21-23, col. 7 lines 31-34, col. 7 lines 45-49) or “e-mail providers” (col. 6 lines 39-49) a "service provider" of Stewart ('061) fits the definition of "network service provider" as is used in the instant application. Furthermore, a “service an information provider 20" is the equivalent of a “information service provider (ISP)” (col. 6 lines 39-49) and both fit the definition of "network service provider" as used in the instant application.

Also, Stewart states, on col. 5 lines 40-55, that the "identification and location data" is used to "provide desired services ... by accessing the appropriate providers … based on the type of information required, network 15 may access one or more information providers 20 to provide the information services to the user." Since the "identification and location data" of Steward ('061) identifies "one or more information providers 20 to provide the information services to the user” (contrary to what applicant stated) and the “information providers 20” can be “network service providers” Stewart (‘061) clearly meets the limitations presented in the claims. Furthermore, Stewart ('061) in combination with IEEE 802.1Q disclose wherein the identification information is VLAN information. Applicant’s arguments are irrelevant.

In reference to the comment:

Stewart's identification information identifies a user or a mobile unit, not a VLAN or a network service provider.

Please see the document 3Com where user or mobile unit identification information (i.e. MAC address) is used to identify a VLAN. In particular, page 10.

66. (New) The wireless access point of claim 44, wherein the wireless access point is further configured to receive a plurality of different sets of identification information corresponding to the plurality of possible network service providers,

wherein selected sets of the plurality of different sets of identification information are recognized by the wireless access point, and wherein selected sets of the plurality of different sets of identification information are not recognized by the wireless access point.

67. (New) The wireless access point of claim 66, wherein the wireless access point is further configured to select a default network service provider for each received set of identification information that is not recognized by the wireless access point.

Response to Arguments mailed on 8/8/2008

Applicant Argues That:

Applicants respectfully submit that Stewart and combinations of references proposed by the Examiner fail to disclose, teach, or suggest, the elements specifically recited in Applicants' claims. For example, the proposed Stewart-P802.1Q/D11 combination fails to disclose, teach, or suggest the following elements recited in independent Claim 1:

> the first wireless access point is operable to implement a plurality of possible VLANs;
> the first wireless access point determining the indicated VLAN from the plurality of possible VLANs according to the identification information.

Stewart discloses an access point (AP) that determines whether a mobile unit can access a particular information provider:

> In steps 35 and 40, the access point 10 scans the mobile unit 5 and determines whether the mobile unit I.D. (identity) matches a prestored I.D., and in step 45, the communication between the mobile unit 5 and the access point 10 begins.

(Stewart, col. 4, lines 1-4.)

> In addition, mobile unit 5 would also be equipped with a code generator which generates an identification code that can be transmitted to and recognized by the access point 10 or a system accessed through access point 10. Such an identification code allows recognition of a user before providing access to system services, thereby providing a measure of security and a service billing mechanism.

(Stewart, col. 3, lines 56-63.)

Stewart suggests that if there are multiple information providers, then there are multiple access points:

> ... FIG. 1 shows one AP 10 and one service and information provider 20 connected to network 15. However, any number of such APs and service and information providers would typically be connected to network 15 to service any number of mobile units, ...

(Stewart, col. 7, lines 33-39.) That is, Stewart suggests that multiple access points, not a single access point, would provide access to multiple information providers.

Furthermore, P802.1 Q/D11 merely discloses:

> VLANs are support over all 802 LAN MAC protocols, and over shared media LANs as well as point-to-point LANS.

(P802.1 Q/D11, p. 14.) Thus, P802.1 Q/D11 fails to remedy the deficiency of Stewart.

Examiner Respectfully Disagrees:

Stewart was not cited to disclose the argues limitation in the non-final rejection mailed on 5/15/2008. Stewart was cited in the response for Patent Application 11/037,784 where a similar response was provided with same citations but in reference to IEEE 802.11 in place of 802.1Q/D11.

P802.1Q/D11 discloses wherein:

the first wireless access point (i.e. IEEE 802 LAN MAC protocol device; see P802.1Q/D11; page 14; "VLANs are supported over all IEEE 802 LAN MAC protocols") is operable to implement a plurality of possible VLANs (see P802.1Q; page 22; “header carries both VLAN identification and priority information”, thus VLAN identification information) and the first wireless access point (i.e. IEEE 802 LAN MAC protocol device; see P802.1Q/D11; page 14; "VLANs are supported over all IEEE 802 LAN MAC protocols") using the indicated VLAN (see P802.1Q/D11; page 15; points “b”, “c”, “d”, and “e”) to provide

the data received from the portable computing device to a destination (i.e. performing transmission; see P802.1/D11; page 15; “VLANS are supported over all IEEE 802 LAN MAC protocols”, thus over 802.11; “Traffic”; thus performing data transmission);

the first wireless access point (i.e. IEEE 802 LAN MAC protocol device; see P802.1Q/D11; page 14; "VLANs are supported over all IEEE 802 LAN MAC protocols") determining the indicated VLAN (see P802.1Q; page 22; “header carries both VLAN identification and priority information”, thus VLAN identification information) from the plurality of possible VLANs (see P802.1Q; page 22; “header carries both VLAN identification and priority information”, thus VLAN identification information from a plurality of VLAN information) according to the identification information (see P802.1Q/D11; page 22; “a tagged fame whose tag header carries both VLAN identification and priority information”, thus identification information).

Therefore, the portions of P802.1Q/D11 cited do not merely disclose that “VLANs are supported over all 802 LAN MAC protocols, and over shared media LANs as well as point-to-point LANS” but disclose the limitations.

Furthermore, 802.1Q/D11 is a published copy of the 802.1Q standard allowing the implementation of VLANS for one of ordinary skill in the art. The VLAN implementation, as shown on page 14, is supported by all IEEE 802 LAN MAC protocols, thus 802.3 and 802.11 protocols. Page 22 discloses that the “header carries both VLAN identification and priority information” thus implementing a plurality of possible VLANs by identification information.

Double Patenting

Amendments submitted 08/08/2008 on to the claims have not overcome the double patenting rejection. If applicant believes otherwise applicant is advised to provide evidence and reasoning.

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Double Patenting with U.S. Patent No 6,571,221 (Application # 09/433,818)

Instant Application	US Patent 6,571,221
26. A network system, comprising: a network; one or more wireless access points coupled to the network, wherein each of one or more wireless access points is operable to communicate using wireless Ethernet with one or more computing devices, wherein each of the one or more wireless access points is configured to receive identification information from a computing	24. A network system, comprising: a plurality of access points operable to be coupled to a network, wherein each of the plurality of access points is configured to communicate with a portable computing device operated by a mobile user; wherein a first access point of the plurality of access points is operable to receive a digital certificate from the portable

device of the one or more computing devices indicating a network service provider of a plurality of possible network service providers, whereing each of the one or more wireless access points is configured to provide access to the plurality of possible network service providers wherein each of the one or more wireless access points includes a memory medium which stores a data structure, wherein the data structure comprises a list of identification information entries and corresponding network service providers, wherein each entry indicates a respective network service provider of the plurality of possible network service providers; wherein each of the one or more wireless access points is operable to determine the network service provider indicated by the identification information from the plurality of possible network service providers wherein, in determining the network service provider for the portable computing device, each of the one or more wireless access points is operable to access the memory medium and use the received identification information to determine the network service provider; wherein network access is provided to the computing device through the indicated network service provider.	computing device, wherein the digital certificate comprises sponsorship information of the mobile user; wherein access charges for access to the network are computed based on the sponsorship information comprised in the digital certificate.
44. A wireless access point for providing network access to one or more computing devices, wherein the wireless access point is operable to be coupled to a network, wherein the wireless access point is operable to communicate with a computing device of the one or more computing devices, wherein the wireless access point is configured to receive identification information from the computing device indicating a network service provider of a plurality of possible network service providers, wherein the wireless access point is configured to provide access to the plurality of possible network service providers, wherein the wireless access point includes a memory medium operable to store a data structure, wherein the data structure comprises a list of identification information entries and corresponding network service providers, wherein each entry indicates a respective network service provider of the plurality of possible network service providers; wherein the wireless access point is operable to determine the network service provider indicated by the identification information from the plurality of possible network service providers; wherein, in determining the network service provider for the	24. A network system, comprising: a plurality of access points operable to be coupled to a network, wherein each of the plurality of access points is configured to communicate with a portable computing device operated by a mobile user; wherein a first access point of the plurality of access points is operable to receive a digital certificate from the portable computing device, wherein the digital certificate comprises sponsorship information of the mobile user;

computing device, the wireless access point is operable to access the memory medium and use the received identification information to determine the network service provider; wherein the wireless access point is operable to provide data received from the computing device to a destination based on the determined network service provider; wherein network access is provided to the computing device through the destination.	wherein access charges for access to the network are computed based on the sponsorship information comprised in the digital certificate.

The applicant is asked to address all potential nonstatutory double patenting issues with the current application and U.S. Patent No. 6,970,927 (Former Application # 09/707,729). Not all double patenting issues have been shown in regard to U.S. Patent No. 6,970,927 (Former Application # 09/707,729) in this office action due to the burden on the examiner.

Instant Application	US Patent 5,835,061
26. A network system, comprising: a network;	1. A geographic-based communications service system for portable computer users, comprising: a portable computer for processing, transmitting and receiving information wherein said portable computer is configured to transmit in a wireless transmission a beacon signal including a unit ID identifying said portable computer; a centralized network;
one or more wireless access points coupled to the network,	a plurality of access points connected to said centralized network and arranged at known locations in a geographic region, wherein each of said plurality of access points is configured to independently detect said beacon signal and, upon detection of said beacon signal by a single one of said plurality of access points in proximity to said portable computer,
wherein each of one or more wireless access points is operable to communicate using wireless Ethernet with one or more computing devices,	said single one of said plurality of access points independently transmits and receives information to and from said portable computer, wherein said information is dependent upon said user ID;
wherein each of the one or more wireless access points is configured to receive identification information from a computing device of the one or more computing devices indicating a network service provider of a plurality of possible network service providers, whereing each of the one or more wireless access points is configured to provide access to the plurality of possible network service providers wherein each of the one or more wireless access points includes	a plurality of information providers connected to said centralized network, said centralized network accessing said information providers based on said user ID received from said single one of said plurality of access points.

a memory medium which stores a data structure, wherein the data structure comprises a list of identification information entries and corresponding network service providers, wherein each entry indicates a respective network service provider of the plurality of possible network service providers; wherein each of the one or more wireless access points is operable to determine the network service provider indicated by the identification information from the plurality of possible network service providers wherein, in determining the network service provider for the portable computing device, each of the one or more wireless access points is operable to access the memory medium and use the received identification information to determine the network service provider; wherein network access is provided to the computing device through the indicated network service provider.	

The applicant is asked to address all potential nonstatutory double patenting issues with the current application and U.S. Patent No. 5,835,061 (Former application # 08/470,004). Not all double patenting issues have been shown in regard to U.S. Patent No. 5,835,061 (Former Application # 08/470,04) in this office action due to the burden on the examiner. Application 08/470,004 claims 1, 13, 17, 18, 19, and 20 show nonstatutory double patenting issues in regards to claims 1, 8, 9, 20, 26, and 44 of the instant application.

2. Claim 26 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 24 of U.S. Patent No 6,571,221 (Application # 09/433,818). Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Claim 26 discloses "a network system, comprising: a network;" which is disclosed by claim 24's limitation of "a network system, comprising:" in reference to a "wireless network system" as disclosed in the abstract of US Patent No. 6,970,927.

Claim 26 discloses "one or more wireless access points coupled to the network," which is disclosed by claim 24's limitation of "a plurality of access points operable to be coupled to a network,"

Claim 26 discloses "wherein each of one or more wireless access points is operable to communicate using wireless Ethernet with one or more computing devices," which is disclosed by claim 24's limitation of "wherein each of the plurality of access points is configured to communicate with a portable computing device operated by a mobile user; "

Claim 26 discloses "wherein each of the one or more wireless access points is configured to receive identification information from a computing device of the one or more computing devices" which is disclosed by claim 24's limitation of "wherein a first access point of the plurality of access points is operable to receive a digital certificate from the portable computing device,"

Claim 26 furthermore discloses "identification information" which is "indicating a network service provider of a plurality of possible network service providers," which is disclosed by claim 24's limitation of "wherein the digital certificate comprises sponsorship information of the mobile user;" which is disclosed in the specification of US Patent No 6,970,927 on col. 2 lines 17-35 which state "the identification information may also uniquely indicate at least one network service provider of a plurality of possible network service providers" and therefore is an obvious modification.

Claim 26 furthermore discloses " wherein each of the one or more wireless access points includes a memory medium which stores a data structure, wherein the data structure comprises a list of identification information entries and corresponding network service providers, wherein each entry indicates a respective network service provider of the plurality of possible network service providers; wherein each of the one or more access points is operable to determine the network service provider indicated by the identification information; wherein, in determining the network service provider for the portable computing device, each of the one or more access points is operable to access the memory medium and use the received identification information to determine the network service provider; wherein network access is provided to the computing device through the indicated network service provider" which is disclosed in the specification of US Patent No 6,970,927 on col. 8 lines 44-67 and col. 9 lines 1-15 and therefore is an obvious modification. Furthermore, the limitations ("identification information" which is "indicating a network service provider of a plurality of possible network service providers,", "wherein the digital certificate comprises sponsorship

information of the mobile user;" and " wherein each of the one or more wireless access points includes a memory medium which stores a data structure, wherein the data structure comprises a list of identification information entries and corresponding network service providers, wherein each entry indicates a respective network service provider of the plurality of possible network service providers; wherein each of the one or more access points is operable to determine the network service provider indicated by the identification information; wherein, in determining the network service provider for the portable computing device, each of the one or more access points is operable to access the memory medium and use the received identification information to determine the network service provider; wherein network access is provided to the computing device through the indicated network service provider") are disclosed also by MacKie-Mason ("Pricing Congestible Network Resources") and P802.1Q/D11 which is the draft of the IEEE VLAN specification and therefore an obvious modification to one of ordinary skill in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by P802.1Q/D11, thereby creating offering the following benefits as stated on page 15 of P802.1Q/D11:

> a) VLANs are supported over all IEEE 802 LAN MAC protocols, and over shared media LANs as well as point-to-point LANs.
> b) VLANs facilitate easy administration of logical groups of stations that can communicate as if they were on the same LAN. They also facilitate easier administration of moves, adds and changes in members of these groups.
> c) Traffic between VLANs is restricted. Bridges forward unicast, multicast and broadcast traffic only on LAN segments that serve the VLAN to which the traffic belongs.

> d) As far as possible, VLANs maintain compatibility with existing bridges and end-stations.
> e) If all Bridge Ports are configured to transmit and receive Untagged Frames (3.14), bridges will work in plug-and-play ISO/IEC 15802-3 mode. End-stations will be able to communicate throughout the Bridged LAN.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by MacKie-Mason ("Pricing Congestible Network Resources"), thereby resolving the "problem of the commons" (see MacKie-Mason; page 1141) and discouraging usage when congestion is present, and for generating revenue for capacity expansion (see MacKie-Mason; page 1141).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Patent No 6,571,221 (Application # 09/433,818), as taught by US Patent No. 6,970,927 (Application # 09/707,729), thereby creating providing multiple levels of network access and services to users of networks (see US 6,970,927; col. 1 line 44-50) therefore the network service provider may then provide Internet access and/or provide other network services commensurate with the user's access level (see US 6,970,927; col. 3 lines 28-43).

2. Claim 44 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 24 of U.S. Patent No 6,571,221 (Application # 09/433,818). Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Claim 44 discloses "a wireless access point for providing network access to one or more computing devices," which is disclosed by claim 24's limitation of "a network system, comprising:" in reference to a "wireless network system" as disclosed in the abstract of US Patent No. 6,970,927.

Claim 44 discloses "wherein the access point is operable to be coupled to a network," which is disclosed by claim 24's limitation of "a plurality of access points operable to be coupled to a network,"

Claim 44 discloses "wherein the wireless access point is operable to communicate with a computing device of the one or more computing devices," which is disclosed by claim 24's limitation of "wherein each of the plurality of access points is configured to communicate with a portable computing device operated by a mobile user;"

Claim 44 discloses "wherein the wireless access point is configured to receive identification information from the computing device" which is disclosed by claim 24's limitation of "wherein a first access point of the plurality of access points is operable to receive a digital certificate from the portable computing device,"

Claim 44 discloses "identification information" which is "indicating a network service provider of a plurality of possible network service providers," which is disclosed by claim 24's limitation of "wherein the digital certificate comprises sponsorship information of the mobile user;"

Claim 44 further discloses "wherein the wireless access point includes a memory medium operable to store a data structure, wherein the data structure comprises a list of

identification information entries and corresponding network service providers, wherein each entry indicates a respective network service provider of the plurality of possible network service providers; wherein the wireless access point is operable to determine the network service provider indicated by the identification information; wherein, in determining the network service provider for the computing device, the wireless access point is operable to access the memory medium and use the received identification information to determine the network service provider; wherein the wireless access point is operable to provide data received from the computing device to a destination based on the determined network service provider; wherein network access is provided to the computing device through the destination." which is disclosed in the specification of US Patent No 6,970,927 on col. 8 lines 44-67 and col. 9 lines 1-15 and therefore is an obvious modification. Furthermore, the limitations are disclosed also by MacKie-Mason ("Pricing Congestible Network Resources") and P802.1Q/D11 which is the draft of the IEEE VLAN specification and therefore an obvious modification to one of ordinary skill in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by P802.1Q/D11, thereby creating offering the following benefits as stated on page 15 of P802.1Q/D11:

> a) VLANs are supported over all IEEE 802 LAN MAC protocols, and over shared media LANs as well as point-to-point LANs.
> b) VLANs facilitate easy administration of logical groups of stations that can communicate as if they were on the same LAN. They also facilitate easier administration of moves, adds and changes in members of these groups.

> c) Traffic between VLANs is restricted. Bridges forward unicast, multicast and broadcast traffic only on LAN segments that serve the VLAN to which the traffic belongs.
> d) As far as possible, VLANs maintain compatibility with existing bridges and end-stations.
> e) If all Bridge Ports are configured to transmit and receive Untagged Frames (3.14), bridges will work in plug-and-play ISO/IEC 15802-3 mode. End-stations will be able to communicate throughout the Bridged LAN.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by MacKie-Mason ("Pricing Congestible Network Resources"), thereby resolving the "problem of the commons" (see MacKie-Mason; page 1141) and discouraging usage when congestion is present, and for generating revenue for capacity expansion (see MacKie-Mason; page 1141).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Patent No 6,571,221 (Application # 09/433,818), as taught by US Patent No. 6,970,927 (Application # 09/707,729), thereby creating providing multiple levels of network access and services to users of networks (see US 6,970,927; col. 1 line 44-50) therefore the network service provider may then provide Internet access and/or provide other network services commensurate with the user's access level (see US 6,970,927; col. 3 lines 28-43).

The applicant is asked to address all potential nonstatutory double patenting issues with the current application and U.S. Patent No. 6,970,927 (Former Application # 09/707,729). Not all double patenting issues have been shown in regard to U.S. Patent No. 6,970,927 (Former Application # 09/707,729) in this office action due to the burden on the examiner.

3. Claim 26 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 5,835,061 (Application # 08/470,004). Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Claim 26 discloses the limitation "a network system, comprising: a network;" which is disclosed by claim 1's limitation of "a geographic-based communications service system for portable computer users, comprising:"

Claim 26 discloses the limitation "one or more wireless access points coupled to the network," which is disclosed by claim 1's limitation of "a plurality of access points connected to said centralized network and arranged at known locations in a geographic region"

Claim 26 discloses the limitation of "wherein each of one or more wireless access points is operable to communicate using wireless Ethernet with one or more computing devices," which is disclosed by claim 1's limitation of "said single one of said plurality of access points independently transmits and receives information to and from said portable computer, wherein said information is dependent upon said user ID;"

Claim 26 discloses the limitation of "wherein each of the one or more wireless access points is configured to receive identification information from a computing device of the one or more computing devices indicating a network service provider of a plurality of possible network service providers," which is disclosed by claim 1's limitation of "a plurality of information providers connected to said centralized network, said centralized

network accessing said information providers based on said user ID received from said single one of said plurality of access points."

Claim 26 discloses the limitation of "wherein each of the one or more wireless access points includes a memory medium which stores a data structure, wherein the data structure comprises a list of identification information entries and corresponding network service providers, wherein each entry indicates a respective network service provider of the plurality of possible network service providers; wherein each of the one or more access points is operable to determine the network service provider indicated by the identification information; wherein, in determining the network service provider for the portable computing device, each of the one or more access points is operable to access the memory medium and use the received identification information to determine the network service provider; wherein network access is provided to the computing device through the indicated network service provider." which is not specifically disclosed by claim 1 but is disclosed in the specification of US Patent No. 5,835,061 on col. 3 lines 45-67 in regards to the memory medium/data structure/management information base, col. 6 lines 38-67 in regards to the information service providers and access to the memory medium. Furthermore, the limitations are disclosed also by MacKie-Mason ("Pricing Congestible Network Resources") and P802.1Q/D11 which is the draft of the IEEE VLAN specification and therefore an obvious modification to one of ordinary skill in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by P802.1Q/D11, thereby creating offering the following benefits as stated on page 15 of P802.1Q/D11:

> a) VLANs are supported over all IEEE 802 LAN MAC protocols, and over shared media LANs as well as point-to-point LANs.
> b) VLANs facilitate easy administration of logical groups of stations that can communicate as if they were on the same LAN. They also facilitate easier administration of moves, adds and changes in members of these groups.
> c) Traffic between VLANs is restricted. Bridges forward unicast, multicast and broadcast traffic only on LAN segments that serve the VLAN to which the traffic belongs.
> d) As far as possible, VLANs maintain compatibility with existing bridges and end-stations.
> e) If all Bridge Ports are configured to transmit and receive Untagged Frames (3.14), bridges will work in plug-and-play ISO/IEC 15802-3 mode. End-stations will be able to communicate throughout the Bridged LAN.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by MacKie-Mason ("Pricing Congestible Network Resources"), thereby resolving the "problem of the commons" (see MacKie-Mason; page 1141) and discouraging usage when congestion is present, and for generating revenue for capacity expansion (see MacKie-Mason; page 1141).

The applicant is asked to address all potential nonstatutory double patenting issues with the current application and U.S. Patent No. 5,835,061 (Former application # 08/470,004). Not all double patenting issues have been shown in regard to U.S. Patent No. 5,835,061 (Former Application # 08/470,04) in this office action due to the burden on the examiner. Application 08/470,004 claims 1, 13, 17, 18, 19, and 20 show nonstatutory double patenting issues in regards to claims 1, 8, 9, 20, 26, and 44 of the instant application.

The applicant's application also has nonstatutory double patenting with the continuations, continuations in part, reissues, and divisionals of U.S. Patent No. 6,571,221 (Former Application # 09/433,818). None of the double patenting issues relating to the continuations, continuations in part, reissues, and divisionals have been shown in the office action due to the excessive burden on the examiner. Filing a terminal disclaimer will resolve the issues between the application and U.S. Patent No. 6,571,221 (Former Application # 09/433,818).

09/551,291, filed 04/18/2000

is a continuation in part of 09/433,818, filed 11/03/1999

09/707,729, filed 11/06/2000

is a continuation in part of 09/551,291, filed 04/18/2000

Which is a continuation in part of 09/433,818, filed 11/03/1999

09/767,374, filed 01/22/2001

is a continuation in part of 09/551,291, filed 04/18/2000

Which is a continuation in part of 09/433,818, filed 11/03/1999

10/848,897, filed 05/19/2004

is a division of 09/767,374, filed 01/22/2001

Which is a continuation in part of 09/551,291, filed 04/18/2000

Which is a continuation in part of 09/433,818, filed 11/03/1999

PCT/US02/01867, filed 01/22/2002

is a continuation of 09/767,374, filed 01/22/2001

Which is a continuation in part of 09/551,291, filed 04/18/2000

Which is a continuation in part of 09/433,818, filed 11/03/1999

11/037,784, filed 01/18/2005

is a continuation of 10/792,179, filed 03/03/2004

Which is a continuation of 09/551,291, filed 04/18/2000

Which is a continuation in part of 09/433,818, filed 11/03/1999

11/403,093, filed 04/12/2006

is a continuation of 10/792,179, filed 03/03/2004

Which is a continuation of 09/551,291, filed 04/18/2000

Which is a continuation in part of 09/433,818, filed 11/03/1999

PCT/US00/41819, filed 11/03/2000

is a continuation of 09/551,291, filed 04/18/2000

Which is a continuation of 09/433,818, filed 11/03/1999

PCT/US00/26082, filed 09/22/2000

is a continuation of 09/433,818, filed 11/03/1999

11/140,519, filed 05/27/2005

is a reissue of 09/433,818, filed 11/03/1999

The following is how the continuations, continuations in part, reissues, and divisionals of U.S. Patent No. 6,571,221 (Former Application # 09/433,818) tree looks:

a. 09/433,818

i. 09/551,291 (cont. in part)

(1) 09/707,729 (cont. in part)

(a) 11/171,130 (div.)

(2) 09/767,374 (cont. in part)

(b) 10/848,897 (div.)

(c) PCT/US02/01867 (cont.)

(3) 10/792,179 (cont. in part) – current application

(d) 11/037,784 (cont.)

(e) 11/403,093 (cont.)

(4) 10/792,568 (cont.)

(5) 10/848,897 (div.)

(6) 10/792,179 (cont.)

(f) 11/037784 (cont.)

(g) 11/403/093 (cont.)

(7) 11/171,130 (div.)

(8) 11/403,093 (cont)

(9) PCT/US00/41819 (cont.)

ii. 11/140,519 (reissue)

iii. PCT/US00/26082

Filing a terminal disclaimer will resolve the double patenting between the application and U.S. Patent No. 6,571,221 (Former Application # 09/433,818).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 19 rejected under 35 U.S.C. 102(b) as being anticipated by Stewart (U.S. 5,835,061).

Regarding claim 9, a method for enabling wireless connections to a network (see Stewart; col. 2 lines 36-45; “mobile users communicate with wireless local area networks”, thus providing access to a wireless network system, a method), comprising: receiving wirelessly (see Stewart et al.; col. 3 lines 45-63; communication between a mobile unit and an access point, thus in a wireless manner) at a wireless access point identification information (see Stewart; col. 2 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information) from a portable computing device (see Stewart; figure 1; “M.U.”, a mobile user), wherein: the wireless access point (see Stewart; figure 1; object 10, a first wireless access point) and the portable computing device (see Stewart; figure 1; “M.U.”, a mobile user) communicate using wireless Ethernet (see Stewart et al.; col. 3 lines 45-63; communication between a mobile unit and an access point using a standard such as 802.11, thus wireless Ethernet), the wireless access point (see Stewart; figure 1; object 10, a first wireless access point) is operable to provide portable computing devices access to a plurality of network service providers (see Stewart; col. 7 lines 32-38; “Fig. 1 shows one AP 10 and one service and information provider 20 connected to network 15. However, any number of such APs and services and information providers would typically be connected to network 15 to service any number of mobile units”, thus using one network provider from a plurality of network providers), each of the network service providers is operable to enable portable computing devices to connect wirelessly to the network (see

Stewart; col. 7 lines 32-38; “Fig. 1 shows one AP 10 and one service and information provider 20 connected to network 15. However, any number of such APs and services and information providers would typically be connected to network 15 to service any number of mobile units”, thus using one network provider from a plurality of network providers), and the identification information (i.e. inquiry request; see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information; col. 4 lines 66-67; col. 5 lines 1-6; “transmission of an inquiry requiring a response”, thus sending information to request a service from a provider) identifies a particular one of the network service providers (see Stewart; col. 7 lines 32-38; “Fig. 1 shows one AP 10 and one service and information provider 20 connected to network 15. However, any number of such APs and services and information providers would typically be connected to network 15 to service any number of mobile units”, thus using one network provider from a plurality of network providers identified by the identification code); determining at the wireless access point the particular one of the network service providers (see Stewart; col. 7 lines 32-38; “Fig. 1 shows one AP 10 and one service and information provider 20 connected to network 15. However, any number of such APs and services and information providers would typically be connected to network 15 to service any number of mobile units”, thus using one network provider from a plurality of network providers) identified in the identification information (i.e. inquiry request; see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information; col. 4 lines 66-67; col. 5 lines 1-6; “transmission of an inquiry requiring a response”, thus sending information to request a service from a provider); receiving (see Stewart; figure 1; “M.U.”, a mobile user) wirelessly (see Stewart et al.; col. 3 lines 45-63; communication between a mobile unit and an access point, thus in a wireless manner); providing the data (see Stewart; abstract; “provides data”) at the wireless access point (see Stewart; figure 1; object 10, a first wireless access point) data from the portable computing device (see Stewart; abstract; “mobile unit"); and transmitting by the wireless access point the data to a destination of the particular one of the network service providers (see Stewart; figure 1; A.P. transmits “INFO PROVIDER 20” data through wireless transceiver 8 and wireless transceiver 6 to

M.U. (the mobile unit), thus transmitting wireless to a destination of the particular one (“20”) of the network service providers).

Regarding claim 19, Stewart discloses the method, wherein said identification information (see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information) comprises a known geographic location (i.e. latitude, longitude, altitude, and other geographic information; see Stewart; col. 4 lines 8-21; “latitude, longitude, altitude", thus known geographic location) of the portable computing device (i.e. mobile unit; see Stewart; col. 4 lines 8-21; "mobile unit").

3. Claims 10, 11, 13 and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (U.S. 5,835,061), and further in view of Pitchaikani (U.S. 5,684,988).

Regarding claim 10, the method of claim 9, further comprising: storing at a memory medium (see Stewart; figure 1; "MIB" col. 6 lines 3-27; "MIB 25 is a mechanism, such as a memory") communicatively coupled to the network a ~~data structure~~ database (see Stewart; figure 1; "MIB"; col. 6 lines 9-37; "MIB 25 is a mechanism, such as memory, which allows the persistent storage of information needed by network 15 to operate. Examples of such information include a directory of all the elements (APs, mobile units, etc) in the network, the topology of the network, characteristics of connection links, performance, and trend statistics and any information which is of interest in the operation of the network 15", thus identification information) comprising network service provider information regarding the network service providers (see Stewart; figure 1; col. 5 lines 40 - 55; "Using this identification and location data, network 15 provides desired services (or arranges to provide desired services by accessing appropriate providers", thus access a list of the plurality of possible network providers); wherein determining at the wireless access point the particular one of the network service providers identified in the identification information (see Stewart; figure 1; col. 5 lines 40 - 55; "Using this identification and location data, network 15 provides desired services (or arranges to provide desired services by accessing appropriate providers)", thus access a list of the plurality of possible network providers) comprises accessing by the wireless access point the network service provider information stored at the memory medium (see Stewart; col. 5 lines 40-67; col. 6 lines 9-26; "MIB 25 is a mechanism, such as a memory, which allows the persistent storage of information needed by the network 15 to operate" and "The information sent back to network 15 includes the identification number of the mobile unit 5 and AP 10, thereby identifying both the user and his location to the network. Using this identification and location data, network 15 provides desired services", thus accessing a medium to determine services provided to mobile unit based on identification information.).

Regarding claim 10, Stewart does not specifically disclose the database storing a data structure.

Regarding claim 10, Pitchaikani discloses the database storing a data structure (see Pitchaikani; col. 8 lines 22-33; “Each MIB object identifier of MIB object identifiers 206 identifies an object. An object is a data structure for storing values for predetermined types of information. The data structure of an object may include a plurality of data types as well as other objects. Each group identifier of group identifiers 208 identifies a specific object group. An object group includes one or more objects identified in MIB object identifiers 206.”).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by Pitchaikani, thereby allowing to reduce functional and data redundancies (see Pitchaikani col. 2 lines 48-50), supplying agent-to-MIB information (see Pitchaikani; col. 2 lines 50-51), providing a mechanism for supplying a specific type of information about a device (see Pitchaikani; col. 2 lines 53-56), and making it possible for the central database be updated to support devices and agents (see Pitchaikani; col. 2 lines 65-67).

Regarding claim 11, the method ~~of claim 10~~, wherein the ~~data structure~~ database (i.e. mechanism for data storage; see Stewart; col. 6 lines 9-26; “mechanism, such as memory, which allows the persistent storage of information”) comprises a Management Information Base (i.e. MIB; see Stewart; col. 6 lines 9-26; “MIB”).

Regarding claim 11, Stewart does not specifically disclose the database storing a data structure.

Regarding claim 11, Pitchaikani discloses the database storing a data structure (see Pitchaikani; col. 8 lines 22-33; “Each MIB object identifier of MIB object identifiers 206 identifies an object. An object is a data structure for storing values for predetermined types of information. The data structure of an object may include a plurality of data types as well as other objects. Each group identifier of group identifiers 208 identifies a specific object group. An object group includes one or more objects identified in MIB object identifiers 206.”).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by Pitchaikani, thereby allowing to reduce functional and data redundancies (see Pitchaikani col. 2 lines 48-50), supplying agent-to-MIB information (see Pitchaikani; col. 2 lines 50-51), providing a mechanism for supplying a specific type of information about a device (see Pitchaikani; col. 2 lines 53-56), and making it possible for the central database be updated to support devices and agents (see Pitchaikani; col. 2 lines 65-67).

Regarding claim 13, the method of claim 9, further comprising: storing at a memory medium (see Stewart; figure 1; "MIB"; col. 6 lines 9-37; “MIB 25 is a mechanism, such as a memory”) communicatively coupled to the network a ~~data structure~~ database comprising the network service providers (see Stewart; figure 1; “MIB”; col. 6 lines 9-37; “MIB 25 is a mechanism, such as memory, which allows the persistent storage of information needed by network 15 to operate. Examples of such information include a directory of all the elements (APs, mobile units, etc) in the network, the topology of the network, characteristics of connection links, performance, and trend statistics and any information which is of interest in the operation of the network 15”, thus identification information), network service provider information regarding the network service providers (see Stewart; figure 1; col. 5 lines 40 - 55; “Using this identification and location data, network 15 provides desired services (or arranges to provide desired services by accessing appropriate providers”, thus access a list of the plurality of possible network providers), -and associated methods for providing data to the respective network service providers (see Stewart; figure 1; col. 5 lines 40-67; “provide desired services by accessing appropriate providers”, thus there exist methods to provide data to the plurality of network providers); wherein: determining at the wireless access point the particular one of the network service providers identified in the identification information comprises accessing by the wireless access point the ~~data structure~~ database stored at the memory medium (see Stewart; col. 5 lines 40-67; col. 6 lines 9-26; “MIB 25 is a mechanism, such as a memory, which allows the persistent storage of information needed by the network 15 to operate” and “The information sent back to network 15 includes the identification number of the mobile unit 5 and AP 10, thereby identifying both the user and his location to the network. Using this identification and location

data, network 15 provides desired services", thus accessing a medium to determine services provided to mobile unit based on identification information.), and the data are transmitted to the destination of the particular one of the network service providers by the wireless access point using the a particular one of the associated methods for providing data to the particular one of the network service providers (see Stewart; figure 1; A.P. transmits "INFO PROVIDER 20" data through wireless transceiver 8 and wireless transceiver 6 to M.U. (the mobile unit), thus transmitting wireless to a destination of the particular one ("20") of the network service providers).

Regarding claim 13, Stewart does not disclose wherein the database is storing a data structure.

Regarding claim 13, Pitchaikani discloses wherein the database is storing a data structure (see Pitchaikani; col. 8 lines 22-33; "Each MIB object identifier of MIB object identifiers 206 identifies an object. An object is a data structure for storing values for predetermined types of information. The data structure of an object may include a plurality of data types as well as other objects. Each group identifier of group identifiers 208 identifies a specific object group. An object group includes one or more objects identified in MIB object identifiers 206.").

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by Pitchaikani, thereby allowing to reduce functional and data redundancies (see Pitchaikani col. 2 lines 48-50), supplying agent-to-MIB information (see Pitchaikani; col. 2 lines 50-51), providing a mechanism for supplying a specific type of information about a device (see Pitchaikani; col. 2 lines 53-56), and making it possible for the central database be updated to support devices and agents (see Pitchaikani; col. 2 lines 65-67).

Regarding claim 14, the method of claim 9, further comprising: storing at a management information base (MIB) (see Stewart; figure 1; "MIB" col. 6 lines 3-27; "MIB 25 is a mechanism, such as a memory") communicatively coupled to the network a data structure comprising (see Stewart; col. 6 lines 3-27; "MIB ... allows the persistent storage of information needed by network to operate", thus MIB is coupled to network and stores data) network service provider information regarding the network service providers (see Stewart; figure 1; "MIB"; col. 6 lines 9-37; "MIB 25 is a mechanism, such as memory, which

allows the persistent storage of information needed by network 15 to operate. Examples of such information include a directory of all the elements (APs, mobile units, etc) in the network, the topology of the network, characteristics of connection links, performance, and trend statistics and any information which is of interest in the operation of the network 15", thus identification information); wherein determining at the wireless access point the particular one of the network service providers identified in the identification information (see Stewart; figure 1; col. 5 lines 40 - 55; "Using this identification and location data, network 15 provides desired services (or arranges to provide desired services by accessing appropriate providers", thus access a list of the plurality of possible network providers) comprises accessing by the wireless access point the network service provider information stored at the MIB (see Stewart; figure 1; col. 5 lines 40 - 55; "Using this identification and location data, network 15 provides desired services (or arranges to provide desired services by accessing appropriate providers)", thus access a list of the plurality of possible network providers).

Regarding claim 14, Stewart does not disclose wherein the database is storing a data structure.

Regarding claim 14, Pitchaikani discloses wherein the database is storing a data structure (see Pitchaikani; col. 8 lines 22-33; "Each MIB object identifier of MIB object identifiers 206 identifies an object. An object is a data structure for storing values for predetermined types of information. The data structure of an object may include a plurality of data types as well as other objects. Each group identifier of group identifiers 208 identifies a specific object group. An object group includes one or more objects identified in MIB object identifiers 206.").

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by Pitchaikani, thereby allowing to reduce functional and data redundancies (see Pitchaikani col. 2 lines 48-50), supplying agent-to-MIB information (see Pitchaikani; col. 2 lines 50-51), providing a mechanism for supplying a specific type of information about a device (see Pitchaikani; col. 2 lines 53-56), and making it possible for the central database be updated to support devices and agents (see Pitchaikani; col. 2 lines 65-67).

4. Claims 12 and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (US 5,835,061) in combination with Pitchaikani (U.S. 5,684,988), and in view of McCloghrie (RFC 1213).

Regarding claim 12, the method of claim 10, wherein the ~~data structure~~ database stores data (see Stewart; col. 6 lines 9-27; "MIB 25 is a mechanism, such as memory, which allows the persistent storage of information needed by network 15 to operate").

Regarding claim 12, Stewart in combination with Pitchaikani do not specifically disclose wherein the data is a destination address of the destination of the particular one of the network service providers.

Regarding claim 12, McCloghrie discloses wherein the data is a destination address (i.e. IP address; see McCloghrie; page 5 "3.6 The Address Translation Group"; the IP group will contain one address translation table, for going from IP addresses to physical addresses. Similarly, when a document defining MIB objects for the CLNP is produced, it will contain two tables, for mappings in both directions, as this is required for full functionality", thus storing IP addresses) of the destination (It is known in the art to one of ordinary skill in the art that an IP address indicates a destination. Therefore, all IP addresses indicate a destination.) of the particular one of the network service providers (i.e. using forwarding tables and address translation tables; see McCloghrie; page 5 "3.6 The Address Translation Group"; pages 5-6 "3.7 The IP Group"; using MIB for forwarding of data and translation addresses).
It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by McCloghrie, thereby providing means of assigning object identifiers; and, to provide a method for implementations of managed agents to know which objects they must implement (see McCloghrie; page 6).

Regarding claim 15, Stewart discloses the method, wherein the management information base stores data (see Stewart; col. 6 lines 9-27; "MIB 25 is a mechanism, such as memory, which allows the persistent storage of information needed by network 15 to operate")

Regarding claim 15, Stewart in combination with Pitchaikani do not specifically disclose wherein the data structure stores a destination address of the destination of the particular one of the network service providers.

Regarding claim 15, McCloghrie disclose wherein the data structure stores a destination address (i.e. IP address; see McCloghrie; page 5 “3.6 The Address Translation Group”; the IP group will contain one address translation table, for going from IP addresses to physical addresses. Similarly, when a document defining MIB objects for the CLNP is produced, it will contain two tables, for mappings in both directions, as this is required for full functionality", thus storing IP addresses) of the destination (It is known in the art to one of ordinary skill in the art that an IP address indicates a destination. Therefore, all IP addresses indicate a destination.) of the particular one of the network service providers i.e. using forwarding tables and address translation tables; see McCloghrie; page 5 “3.6 The Address Translation Group”; pages 5-6 “3.7 The IP Group”; using MIB for forwarding of data and translation addresses).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by McCloghrie, thereby providing means of assigning object identifiers; and, to provide a method for implementations of managed agents to know which objects they must implement (see McCloghrie; page 6).

1. Claim 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (U.S. 5,835,061), and further in view of Barkan (U.S. 5,864,667).

Regarding claim 16, Stewart discloses the method (see Stewart; col. 2 lines 36-45; “mobile users communicate with wireless local area networks”, thus providing access to a wireless network system, a method) with identification information (see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information).

Regarding claim 16, Stewart does not specifically disclose wherein said identification information comprises a digital certificate.

Regarding claim 16, Barkan discloses wherein said identification information (i.e. identification package; see Barkan; col. 3 lines 56-67; “identification package”) comprises a digital (see Barkan; col. 3 lines 56-67; “digital”) certificate (see Barkan; col. 3 lines 56-67; “certificate”).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart (U.S. 5,835,061) and P802.1Q/D11, as taught by Barkan, thereby offering alleviating the problem of user identification encountered in various situations in the modern period of widespread use of global communications and information exchange (see Barkan; col. 2 lines 55-67).

2. Claims 17 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (U.S. 5,835,061), and further in view of 802.11D-1997.

Regarding claim 17, Stewart discloses the method (see Stewart; col. 2 lines 36-45; “mobile users communicate with wireless local area networks”, thus providing access to a wireless network system, a method) with identification information (see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information).

Regarding claim 18, Stewart discloses the method (see Stewart; col. 2 lines 36-45; “mobile users communicate with wireless local area networks”, thus providing access to a wireless network system, a method) with identification information (see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information).

Regarding claim 17, Stewart does not specifically discloses wherein said identification information comprises an IEEE 802.11 system identification.

Regarding claim 18, Stewart does not specifically disclose wherein said identification information comprises a media access control (MAC) identification.

Regarding claim 17, 802.11D-1997 discloses wherein said identification information comprises an IEEE 802.11 (see 802.11D-1997; page 1; "802.11") system identification (see 802.11D-1997; page 273 "Annex A: Protocol Implementation Conformance Statement (PICS)"; "PICS is a statement of which capabilities and options

of the protocol have been implemented", thus identification information identifying the implementation system.).

Regarding claim 18, 802.11D-1997 discloses wherein said identification information (i.e. PICS proforma information; see 802.11D-1997; page 273; "A.3.1 General structure of the PICS proforma") comprises a media access control (MAC) identification (see 802.11D-1997; page 277 “A.4.4 MAC Protocol”; page 277 “A.4.4.1 MAC Protocol Capabilities”; page 280 “A.4.4.2 MAC frames”; page 281 “A.4.4.3 "Frame exchange sequences"; page 281 "A.4.4.4 MAC Addressing functions"; different MAC identification information).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart (U.S. 5,835,061), as taught by 802.11D-1997, thereby offering the following PICS benefits as stated on page 272 of 802.11D-1997:

> a) By the protocol implementor, as a checklist to reduce the risk of failure to conform to the standard through oversight;
> b) By the supplier and acquirer, or potential acquirer, of the implementation, as a detailed indication of the capabilities of the implementation, stated relative to the common basis for understanding provided by the standard PICS proforma;
> c) By the user, or potential user, of the implementation, as a basis for initially checking the possibility of interworking with another implementation (note that, while interworking can never be guaranteed, failure to interwork can often be predicted from incompatible PICS proformas)
> d) By a protocol tester, as the basis for selecting private tests against which to assess the claim for conformance of the implementation.

3. Claims 26, 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (U.S. 5,835,061), and further in view of Pitchaikani (U.S. 5,684,988)

Regarding claim 26, Stewart discloses a network system, comprising: a network; and one or more wireless access points (see Stewart; figure 1; "A.P.", thus access point in one geographic region of which there are many) coupled to the network (see Stewart; figure 1; a diagram of a network with an A, thus an AP couple to a network), wherein each of one or more wireless access points (see Stewart; figure 1; "A.P.", thus a wireless access point of one geographic location from a plurality of access points from other geographic locations) is operable to communicate (see Stewart; abstract; "communicates") using wireless Ethernet (see Stewart; col. 1 lines 5-15; "wireless local area", thus using Ethernet for devices such as a "notebook, personal computer, PDA, etc") with one or more computing devices (see Stewart; abstract; "the network communicates with information providers connected to the network and provides data to the mobile unit through the access point corresponding to the mobile unit.", thus mobile units connect to network information providers), wherein each of the one or more wireless access points (see Stewart; figure 1; "A.P.", thus a wireless access point of one geographic location from a plurality of access points from other geographic locations) is configured to receive identification information (i.e. identification code) from a computing device (i.e. mobile unit) of the one or more computing devices (see Stewart; abstract; "the network communicates with information providers connected to the network and provides data to the mobile unit through the access point corresponding to the mobile

unit.", thus mobile units connect to network information providers) indicating a network service provider of a plurality of possible network service providers (see Stewart; col. 7 lines 32-38; "Fig. 1 shows one AP 10 and one service and information provider 20 connected to network 15. However, any number of such APs and services and information providers would typically be connected to network 15 to service any number of mobile units", thus using one network service provider from a plurality of network service providers); determining the network service provider (see Stewart; col. 7 lines 32-38; "Fig. 1 shows one AP 10 and one service and information provider 20 connected to network 15. However, any number of such APs and services and information providers would typically be connected to network 15 to service any number of mobile units", thus using one network service provider from a plurality of network service providers), wherein each of the one or more wireless access points is configured to provide access to the plurality of possible network service providers, wherein each of the plurality of possible network service providers is configured to enable particular ones of the one or more computing devices to connect wirelessly to the network; wherein each of the one or more wireless access points (see Stewart; figure 1; "A.P.", thus a wireless access point of one geographic location from a plurality of access points from other geographic locations) includes a memory medium (see Stewart; figure 1; "MIB"; col. 6 lines 9-37; "MIB 25 is a mechanism, such as a memory"), wherein the memory medium comprises a list of identification information entries (see Stewart; figure 1; "MIB"; col. 6 lines 9-37; "MIB 25 is a mechanism, such as memory, which allows the persistent storage of information needed by network 15 to operate. Examples of such

information include a directory of all the elements (APs, mobile units, etc) in the network, the topology of the network, characteristics of connection links, performance, and trend statistics and any information which is of interest in the operation of the network 15", thus identification information) and corresponding network service providers, wherein each entry (see Stewart; col. 3 lines 45-67; "code") indicates a respective network service provider (see Stewart; col. 3 lines 45-67; "code allows recognition of a user before providing access to system services") of the plurality of possible network service providers (see Stewart; col. 3 lines 45-67; figure 1; information providers who provide access to system services); wherein each of the one or more wireless access points (see Stewart; figure 1; "A.P.", thus a wireless access point of one geographic location from a plurality of access points from other geographic locations) is operable to determine the network service provider (see Stewart; col. 3 lines 45-67; figure 1; information providers) indicated by the identification information (see Stewart; col. 3 lines 45-67; figure 1; "provide access to system services" by "code") from the plurality of possible network service providers; wherein, in determining the network service provider (see Stewart; col. 7 lines 32-38; "Fig. 1 shows one AP 10 and one service and information provider 20 connected to network 15. However, any number of such APs and services and information providers would typically be connected to network 15 to service any number of mobile units", thus using one network service provider from a plurality of network service providers) for the portable computing device (i.e. mobile unit, each of the one or more access points (see Stewart; figure 1; "A.P.", thus a wireless access point of one geographic location from a plurality of access points

from other geographic locations) is operable to access the memory medium (see Stewart; figure 1; memory) and use the received identification information (i.e. inquiry request; see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information; col. 4 lines 66-67; col. 5 lines 1-6; “transmission of an inquiry requiring a response”, thus sending information to request a service from a provider) to determine the network service provider (see Stewart; col. 3 lines 45-63); wherein network access (see Stewart; figure 1; access point providing network access to a mobile unit) is provided to the computing device (see Stewart; figure 1; “m.u.” mobile unit) through the indicated network service provider (see Stewart; figure 1; information is provided through provider).

Regarding claim 27, Stewart discloses the network system, wherein management information base (see Stewart; figure 1; “M.I.B.”, a management information base) further stores a respective network service provider (see Stewart; figure 1; “information provider” thus an information service provider, a network service provider) for each identification information entry (see Stewart; col. 2 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information); wherein, in determining the network service provider (see Stewart; figure 1; “information provider” thus an information service provider, a network service provider) for the computing device, each of the one or more wireless access points (see Stewart; figure 1; “A.P.”, thus an access point of a plurality of access points) is operable to use the identification information (see Stewart;

col. 2 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information generated by mobile unit and readable by the access point) to determine the network service provider (see Stewart; figure 1; “information provider” thus an information service provider, a network service provider) stored in the management information base corresponding to the identification information (see Stewart; col. 3 lines 45-67; “Such an identification code allows recognition of a user before providing access to system services, thereby providing a measure of security and a service billing mechanism”, thus using the code to identify services used by user for billing and other useful mechanisms).

Regarding claim 30, Stewart discloses network system, wherein said identification information (see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information) comprises a known geographic location (i.e. latitude, longitude, altitude, and other geographic information; see Stewart; col. 4 lines 8-21; “latitude, longitude, altitude", thus known geographic location) of the portable computing device (i.e. mobile unit; see Stewart; col. 4 lines 8-21; "mobile unit").

Regarding claim 32, Stewart discloses the network system (see Stewart; figure 1; “A.P.”, thus access point of a network system comprising items 10 (Access Point), 15 (Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)), wherein a subset of the one or more portable computing devices (see Stewart; figure 1; “M.U.” a mobile unit, thus a portable computing device) are portable computing devices (see Stewart; figure 1; “M.U.” a mobile unit from a plurality of mobile

units, thus a portable computing device of a plurality of computing devices which connect to the access point).

Regarding claim 26, Stewart does not specifically disclose storing a data structure.

Regarding claim 26, Pitchaikani discloses storing a data structure (see Pitchaikani; col. 8 lines 22-33; "Each MIB object identifier of MIB object identifiers 206 identifies an object. An object is a data structure for storing values for predetermined types of information. The data structure of an object may include a plurality of data types as well as other objects. Each group identifier of group identifiers 208 identifies a specific object group. An object group includes one or more objects identified in MIB object identifiers 206.")

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by Pitchaikani, thereby allowing to reduce functional and data redundancies (see Pitchaikani col. 2 lines 48-50), supplying agent-to-MIB information (see Pitchaikani; col. 2 lines 50-51), providing a mechanism for supplying a specific type of information about a device (see Pitchaikani; col. 2 lines 53-56), and making it possible for the central database be updated to support devices and agents (see Pitchaikani; col. 2 lines 65-67).

4. Claims 28, 29, 33, 34, 35, 36, 37, 41, 42, and 43 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (U.S. 5,835,061) in combination with Pitchaikani (U.S. 5,684,988), and further in view of IEEE802.11D-1997.

Regarding claim 28, Stewart discloses the method (see Stewart; col. 2 lines 36-45; “mobile users communicate with wireless local area networks”, thus providing access to a wireless network system, a method) with identification information (see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information).

Regarding claim 29, Stewart discloses the method (see Stewart; col. 2 lines 36-45; “mobile users communicate with wireless local area networks”, thus providing access to a wireless network system, a method) with identification information (see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information).

Regarding claim 32, Stewart discloses the network system (see Stewart; figure 1; “A.P.”, thus access point of a network system comprising items 10 (Access Point), 15 (Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)), wherein a subset of the one or more portable computing devices (see Stewart; figure 1; “M.U.” a mobile unit, thus a portable computing device) are portable computing devices (see Stewart; figure 1; “M.U.” a mobile unit from a plurality of mobile

units, thus a portable computing device of a plurality of computing devices which connect to the access point).

Regarding claim 33, Stewart discloses the network system (see Stewart; figure 1; "A.P.", thus access point of a network system comprising items 10 (Access Point), 15 (Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)).

Regarding claim 34, Stewart discloses the network system (see Stewart; figure 1; "A.P.", thus access point of a network system comprising items 10 (Access Point), 15 (Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)).

Regarding claim 35, Stewart discloses the network system (see Stewart; figure 1; "A.P.", thus access point of a network system comprising items 10 (Access Point), 15 (Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)).

Regarding claim 36, Stewart discloses the network system (see Stewart; figure 1; "A.P.", thus access point of a network system comprising items 10 (Access Point), 15 (Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)) and network service providers (see Stewart; figure 1; information service provider of a plurality information service providers, thus networks service providers)

Regarding claim 37, Stewart discloses the network system (see Stewart; figure 1; "A.P.", thus access point of a network system comprising items 10 (Access Point), 15

(Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)).

Regarding claim 41, Stewart discloses the network system (see Stewart; figure 1; "A.P.", thus access point of a network system comprising items 10 (Access Point), 15 (Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)).

Regarding claim 42, Stewart discloses the network system (see Stewart; figure 1; "A.P.", thus access point of a network system comprising items 10 (Access Point), 15 (Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)).

Regarding claim 43, Stewart discloses the network system (see Stewart; figure 1; "A.P.", thus access point of a network system comprising items 10 (Access Point), 15 (Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)), with a database (see Stewart; figure 1; a database) and a network service provider (see Stewart; figure 1; network service provider of a plurality of service providers).

Regarding claim 28, Stewart does not specifically discloses wherein said identification information comprises an IEEE 802.11 system identification.

Regarding claim 29, Stewart does not specifically disclose wherein said identification information comprises a media access control (MAC) identification.

Regarding claim 33, Stewart does not specifically discloses wherein at least a subset of the one or more wireless access points are operable to concurrently use a plurality of radio frequency (RF) channels.

Regarding claim 34, Stewart does not specifically discloses wherein a first wireless access point of the subset is operable to assign one or more RF channels for communication with a computing device.

Regarding claim 35, Stewart does not specifically disclose the network, wherein the first wireless access point is operable to assign the RF channel based on the identification information received from the computing device.

Regarding claim 36, Stewart does not specifically disclose wherein the first wireless access point is operable to assign the RF channel

Regarding claim 37, Stewart does not specifically disclose wherein the first wireless access point is operable to determine an access level for the computing device after receiving the identification; and wherein the first wireless access point is operable to assign a RF channel for communication with the computing device based on the determined access level.

Regarding claim 41, Stewart does not specifically disclose wherein at least a subset of the identification information entries each indicate at least one RF channel.

Regarding claim 42, Stewart does no specifically disclose wherein the indicated RF channel is used in providing network access.

Regarding claim 43, Stewart does not specifically disclose wherein the identification information; is a RF channel wherein each of the subset of the one or

more wireless access points is operable to index into the data structure using the identification information to determine the RF channel corresponding to the identification information; wherein each of the subset of the one or more wireless access points is operable to assign a RF channel indicated by the data structure for each identification information entry.

Regarding claim 28, 802.11D-1997 discloses wherein said identification information (i.e. PICS proforma information; see 802.11D-1997; page 273; "A.3.1 General structure of the PICS proforma") comprises an IEEE 802.11 (see 802.11D-1997; page 1; "802.11") system identification (see 802.11D-1997; page 273 "Annex A: Protocol Implementation Conformance Statement (PICS)"; "PICS is a statement of which capabilities and options of the protocol have been implemented", thus identification information identifying the implementation system.).

Regarding claim 29, 802.11D-1997 discloses wherein said identification information (i.e. PICS proforma information; see 802.11D-1997; page 273; "A.3.1 General structure of the PICS proforma") comprises a media access control (MAC) identification (see 802.11D-1997; page 277 “A.4.4 MAC Protocol”; page 277 “A.4.4.1 MAC Protocol Capabilities”; page 280 “A.4.4.2 MAC frames”; page 281 “A.4.4.3 "Frame exchange sequences"; page 281 "A.4.4.4 MAC Addressing functions"; different MAC identification information).

Regarding claim 33, IEEE802.11 more specifically discloses wherein at least a subset of the one or more wireless access point (i.e. 802.11 access points; see IEEE802.11; abstract; “The medium access control (MAC) and physical characteristics

for wireless local area networks (LANs) are specified in this standard, part of a series of standards for local and metropolitan area networks", thus a standard for "wireless local area networks" and therefore operable on a wireless access point) are operable to concurrently use a plurality of radio frequency (RF) channels (see IEEE802.11; page 249 "Table 63"; different frequency channels operable on a wireless access point based on the IEEE802.11 standard).

Regarding claim 34, IEEE802.11 discloses wherein a first wireless access point of the subset (see IEEE802.11; abstract; "The medium access control (MAC) and physical characteristics for wireless local area networks (LANs) are specified in this standard, part of a series of standards for local and metropolitan area networks", thus for a "wireless local area networks" of which networks may contain one or more wireless access points of which a subset operate using the 802.11 standard) is operable to assign one or more RF channels for communication with a computing device (see IEEE802.11; page 249 "table 63"; pages 248-249 "15.3.6 PMD operating specifications, general"; different channels (14 in particular) that a wireless access point may use to communicate with a computing device).

Regarding claim 35, IEEE802.11 discloses wherein the first wireless access point (i.e. 802.11 access points; see IEEE802.11; abstract; "The medium access control (MAC) and physical characteristics for wireless local area networks (LANs) are specified in this standard, part of a series of standards for local and metropolitan area networks", thus a standard for "wireless local area networks" and therefore operable on a wireless access point) is operable to assign the RF channel (see IEEE802.11; page 249 "table

63"; pages 248-249 "15.3.6 PMD operating specifications, general"; different RF channels assignable by wireless access point) based on the identification information (see IEEE802.11; page 274 "A.3 Instructions for completing the PICS proforma"; "The first part of the PICS proforma, Implementation Identification and Protocol Summary, is to be completed as indicated with the information necessary to identify fully both the supplier and the implementation", thus identification information) received from the computing device (see IEEE802.11; page 284-285 "A.4.6 Direct Sequence PHY functions"; page 274 "A.3 Instructions for completing the PICS proforma"; "The PICS proforma for a station consists of A.4.1, through A.4.4 inclusive, and at least one of A.4.5, A.4.6 or A.4.7 corresponding to the PHY implementation", therefore the PICS contains "implementation identification" information that includes the PHY implementation which specifies what RF channel is being used as shown in figures A.4.6, A.4.6, and A.4.7)

Regarding claim 36, IEEE802.11 discloses wherein the first wireless access point (i.e. 802.11 access points; see IEEE802.11; abstract; "The medium access control (MAC) and physical characteristics for wireless local area networks (LANs) are specified in this standard, part of a series of standards for local and metropolitan area networks", thus a standard for "wireless local area networks" and therefore operable on a wireless access point); is operable to assign the RF channel (see IEEE802.11; page 249 "table 63"; pages 248-249 "15.3.6 PMD operating specifications, general"; different RF channels assignable by wireless access point).

Regarding claim 37, IEEE802.11 more specifically disclose wherein the first wireless access point (i.e. 802.11 access points; see IEEE802.11; abstract; “The medium access control (MAC) and physical characteristics for wireless local area networks (LANs) are specified in this standard, part of a series of standards for local and metropolitan area networks”, thus a standard for "wireless local area networks” and therefore operable on a wireless access point) is operable to determine an access level (see IEEE802.11; page 273 “Annex A”; describes the medium access control “protocol implementation conformance statement (PICS) proforma” used to provide specific access level over the medium access control) for the computing device after receiving (see IEEE802.11; page 284-285 “A.4.6 Direct Sequence PHY functions”; page 274 “A.3 Instructions for completing the PICS proforma”; “The PICS proforma for a station consists of A.4.1, through A.4.4 inclusive, and at least one of A.4.5, A.4.6 or A.4.7 corresponding to the PHY implementation", therefore the PICS contains “implementation identification” information that includes the PHY implementation which specifies what RF channel is being used as shown in figures A.4.6, A.4.6, and A.4.7) the identification information (see IEEE802.11; page 274 “A.3 Instructions for completing the PICS proforma”; “The first part of the PICS proforma, Implementation Identification and Protocol Summary, is to be completed as indicated with the information necessary to identify fully both the supplier and the implementation”, thus identification information); and wherein the first wireless access point (i.e. 802.11 access points; see IEEE802.11; abstract; “The medium access control (MAC) and physical characteristics for wireless local area networks (LANs) are specified in this

standard, part of a series of standards for local and metropolitan area networks", thus a standard for "wireless local area networks" and therefore operable on a wireless access point) is operable to assign a RF channel (see IEEE802.11; page 249 "table 63"; pages 248-249 "15.3.6 PMD operating specifications, general"; different RF channels assignable by wireless access point) for communication with the computing device based on the determined access level (see IEEE802.11; page 273 "Annex A"; medium access control decides the access level based on the PICS proforma which specifies the identification information containing the RF channel information).

Regarding claim 41, IEEE802.11 discloses wherein at least a subset of the identification information (see IEEE802.11; page 274 "A.3 Instructions for completing the PICS proforma"; "The first part of the PICS proforma, Implementation Identification and Protocol Summary, is to be completed as indicated with the information necessary to identify fully both the supplier and the implementation", thus identification information of which information in A.4.5, A.4.6 or A.4.7 is a subset that specifies channel) entries each indicate at least one RF channel (see IEEE802.11; page 284-285 "A.4.6 Direct Sequence PHY functions"; page 274 "A.3 Instructions for completing the PICS proforma"; "The PICS proforma for a station consists of A.4.1, through A.4.4 inclusive, and at least one of A.4.5, A.4.6 or A.4.7 corresponding to the PHY implementation", therefore the PICS contains "implementation identification" information that includes the PHY implementation which specifies what RF channel is being used as shown in figures A.4.6, A.4.6, and A.4.7).

Regarding claim 42, IEEE802.11 discloses wherein the indicated RF channel (see IEEE802.11; page 249 “Table 63”; Radio “frequency” channel listing and their “regulatory domains") is used in providing network access (see IEEE802.11; Annex A “Protocol Implementation Conformance Statement (PICS) proforma”; “The PICS is a statement of which capabilities and options of the protocol have been implemented.”, therefore the RF channels specified in the PICS proforma is used to provide network access).

Regarding claim 43, IEEE802.11 discloses wherein the identification information (i.e. information storable in a database; see IEEE802.11; page 274 “A.3 Instructions for completing the PICS proforma”; “The first part of the PICS proforma, Implementation Identification and Protocol Summary, is to be completed as indicated with the information necessary to identify fully both the supplier and the implementation”, thus identification information of which information in A.4.5, A.4.6 or A.4.7 is a subset that specifies channel); is a RF channel (see IEEE802.11; page 284-285 “A.4.6 Direct Sequence PHY functions”; page 274 “A.3 Instructions for completing the PICS proforma”; “The PICS proforma for a station consists of A.4.1, through A.4.4 inclusive, and at least one of A.4.5, A.4.6 or A.4.7 corresponding to the PHY implementation", therefore the PICS contains “implementation identification” information that includes the PHY implementation which specifies what RF channel is being used as shown in figures A.4.6, A.4.6, and A.4.7) wherein each of the subset of the one or more wireless access points (i.e. 802.11 access points; see IEEE802.11; abstract; “The medium access control (MAC) and physical characteristics for wireless local area networks (LANs) are

specified in this standard, part of a series of standards for local and metropolitan area networks", thus a standard for "wireless local area networks" and therefore operable on a wireless access point) is operable to index into the data structure using the identification information (i.e. information storable in a database; see IEEE802.11; page 274 "A.3 Instructions for completing the PICS proforma"; "The first part of the PICS proforma, Implementation Identification and Protocol Summary, is to be completed as indicated with the information necessary to identify fully both the supplier and the implementation", thus identification information of which information in A.4.5, A.4.6 or A.4.7 is a subset that specifies channel) to determine the RF channel (see IEEE802.11; page 284-285 "A.4.6 Direct Sequence PHY functions"; page 274 "A.3 Instructions for completing the PICS proforma"; "The PICS proforma for a station consists of A.4.1, through A.4.4 inclusive, and at least one of A.4.5, A.4.6 or A.4.7 corresponding to the PHY implementation", therefore the PICS contains "implementation identification" information that includes the PHY implementation which specifies what RF channel is being used as shown in figures A.4.6, A.4.6, and A.4.7) corresponding to the identification information (i.e. information storable in a database; see IEEE802.11; page 274 "A.3 Instructions for completing the PICS proforma"; "The first part of the PICS proforma, Implementation Identification and Protocol Summary, is to be completed as indicated with the information necessary to identify fully both the supplier and the implementation", thus identification information of which information in A.4.5, A.4.6 or A.4.7 is a subset that specifies channel); wherein each of the subset of the one or more wireless access points (i.e. 802.11 access points; see IEEE802.11; abstract; "The

medium access control (MAC) and physical characteristics for wireless local area networks (LANs) are specified in this standard, part of a series of standards for local and metropolitan area networks", thus a standard for "wireless local area networks" and therefore operable on a wireless access point) is operable to assign a RF channel (see IEEE802.11; page 284-285 "A.4.6 Direct Sequence PHY functions"; page 274 "A.3 Instructions for completing the PICS proforma"; "The PICS proforma for a station consists of A.4.1, through A.4.4 inclusive, and at least one of A.4.5, A.4.6 or A.4.7 corresponding to the PHY implementation", therefore the PICS contains "implementation identification" information that includes the PHY implementation which specifies what RF channel is being used as shown in figures A.4.6, A.4.6, and A.4.7) indicated by the data structure for each identification information entry (i.e. information storable in a database; see IEEE802.11; page 274 "A.3 Instructions for completing the PICS proforma"; "The first part of the PICS proforma, Implementation Identification and Protocol Summary, is to be completed as indicated with the information necessary to identify fully both the supplier and the implementation", thus identification information of which information in A.4.5, A.4.6 or A.4.7 is a subset that specifies channel).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart (U.S. 5,835,061) and P802.1Q/D11, as taught by 802.11D-1997, thereby offering the following PICS benefits as stated on page 272 of 802.11D-1997:

> a) By the protocol implementor, as a checklist to reduce the risk of failure to conform to the standard through oversight;
> b) By the supplier and acquirer, or potential acquirer, of the implementation, as a detailed indication of the capabilities of the implementation, stated relative to the common basis for understanding provided by the standard PICS proforma;
> c) By the user, or potential user, of the implementation, as a basis for initially checking the possibility of interworking with another implementation (note that, while interworking can never be guaranteed, failure to interwork can often be predicted from incompatible PICS proformas)

d) By a protocol tester, as the basis for selecting private tests against which to assess the claim for conformance of the implementation.

5. Claims 38, 39, and 40 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (U.S. 5,835,061), Pitchaikani (U.S. 5,684,988), and IEEE802.11D-1997, and further in view of Muir.

Regarding claim 38, Stewart discloses the network system (see Stewart; figure 1; “A.P.”, thus access point of a network system comprising items 10 (Access Point), 15 (Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)) and the first wireless access point (see Stewart; figure 1; a first "A.P.", thus an access point).

Regarding claim 39, Stewart discloses the network system (see Stewart; figure 1; “A.P.”, thus access point of a network system comprising items 10 (Access Point), 15 (Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)).

Regarding claim 40, Stewart discloses the network system (see Stewart; figure 1; “A.P.”, thus access point of a network system comprising items 10 (Access Point), 15 (Network), 25 (Management Information Base), 20 (Info Provider), 21 (Processor), and 22 (Memory)).

Regarding claim 38, Stewart does not specifically disclose communication with a first computing device of the one or more computing devices using a first RF channel of the plurality of RF channels and communicating with a second computing device of the one or more computing devices using a second RF channel of the plurality of RF channels.

Regarding claim 39, Stewart does not specifically disclose wherein the first RF channel and the second RF channel are different RF channels.

Regarding claim 40, Stewart does not specifically disclose wherein the first RF channel and the second RF channel are non-overlapping RF channels.

Regarding claim 38, Muir more specifically discloses communication with a first computing device (i.e. a station) of the one or more computing devices (i.e. out of many stations) using a first RF channel of the plurality of RF channels (see Muir; pages 1-2 “2. Protocol Description"; figure 2; figure 3; figure 4; “wireless network with multiple transmission channels” thus stations with a channel for data transmission. Figures 2, 3, and 4 show multiple channels (Channels A and B) based on 2 stations) and communicating with a second computing device (i.e. station) of the one or more computing devices (i.e. out of many stations) using a second RF channel of the plurality of RF channels (see Muir; pages 1-2 “2. Protocol Description"; figure 2; figure 3; figure 4; “wireless network with multiple transmission channels” thus stations with a channel for data transmission. Figures 2, 3, and 4 show multiple channels (Channels A and B) based on 2 stations).

Regarding claim 39, IEEE802.11 discloses wherein the first RF channel (see IEEE802.11; page 249 “Table 63”; “CHNL_ID” is 1 for first channel) and the second RF channel (see IEEE802.11; page 249 “Table 63”; “CHNL_ID” is 7 for second channel) are different RF channels (see IEEE802.11; page 249 “Table 63”; CHNL_ID = 1 is at a frequency of 2412 MHZ while CHNL_ID = 7 is at a frequency of 2442 MHZ, therefore the channels are different RF channels since they are at different frequencies).

Regarding claim 40, IEEE802.11 more specifically disclose wherein the first RF channel (see IEEE802.11; page 249 “Table 63”; channel 1 at 2412 MHZ) and the second RF channel (see IEEE802.11; page 249; “Table 63”; channel 2 at 2442 MHZ) are non-overlapping RF channels (see IEEE802.11; page 249 “Table 63”; “In a multiple cell network topology, overlapping and/or adjacent cells using different channels can operate simultaneously without interference if the distance between the center frequencies is at least 30 MHZ”, the difference between the frequencies is 30 MHZ therefore these are non-overlapping channels due to the different frequencies).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by Muir, thereby providing excellent performance and remaining stable under all network load levels by dividing the channel (see Muir; abstract) and also using multiple channels to ensure collision-free data transmission in a network (see Muir; "1 Introduction").

6. Claims 31 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (U.S. 5,835,061) in combination with Pitchaikani (U.S. 5,684,988), and further in view of Barkan (U.S. 5,864,667).

Regarding claim 31, Stewart discloses the method (see Stewart; col. 2 lines 36-45; “mobile users communicate with wireless local area networks”, thus providing access to a wireless network system, a method) with identification information (see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information).

Regarding claim 31, Stewart does not specifically disclose wherein said identification information comprises a digital certificate.

Regarding claim 31, Barkan discloses wherein said identification information (i.e. identification package; see Barkan; col. 3 lines 56-67; “identification package”) comprises a digital (see Barkan; col. 3 lines 56-67; “digital”) certificate (see Barkan; col. 3 lines 56-67; “certificate”).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart (U.S. 5,835,061) and P802.1Q/D11, as taught by Barkan, thereby offering alleviating the problem of user identification encountered in various situations in the modern period of widespread use of global communications and information exchange (see Barkan; col. 2 lines 55-67).

7. Claim 44, 45, 46, 47, 48, 49, 50, 57, 58, and 65 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (U.S. 5,835,061), and further in view of Pitchaikani (U.S. 5,684,988).

Regarding claim 44, Stewart discloses a wireless access point (see Stewart; figure 1; "A.P.", thus a wireless access point) for providing network access (see Stewart; abstract; "the network communicates with information providers connected to the network and provides data to the mobile unit") to one or more computing devices, (see Stewart; abstract; "mobile unit") wherein the wireless access point (see Stewart; figure 1; "A.P.", thus access point) is operable to be coupled to a network (see Stewart; figure 1; a diagram of a network with an A, thus an AP couple to a network), wherein the wireless access point (see Stewart; figure 1; "A.P.", thus a wireless access point) is operable to communicate (see Stewart; abstract; "communicates") with a computing device (see Stewart; abstract; "mobile unit") of the one or more computing devices (see Stewart; abstract; "the network communicates with information providers connected to the network and provides data to the mobile unit through the access point corresponding to the mobile unit.") wherein the wireless access point (see Stewart; figure 1; "A.P.", thus a wireless access point) is configured to receive identification information (i.e. identification code) from the computing device (see Stewart; abstract; "the network communicates with information providers connected to the network and provides data to the mobile unit through the access point corresponding to the mobile

unit.", thus mobile units connect to network information providers) indicating a network service provider of a plurality of possible network service providers (see Stewart; col. 7 lines 32-38; "Fig. 1 shows one AP 10 and one service and information provider 20 connected to network 15. However, any number of such APs and services and information providers would typically be connected to network 15 to service any number of mobile units", thus using one network service provider from a plurality of network service providers), wherein the wireless access point is configured to provide access to the plurality of possible network provides (see Stewart; col. 7 lines 32-38; "Fig. 1 shows one AP 10 and one service and information provider 20 connected to network 15. However, any number of such APs and services and information providers would typically be connected to network 15 to service any number of mobile units", thus using one network service provider from a plurality of network service providers), wherein the wireless access point includes a memory medium (see Stewart; figure 1; "MIB"; col. 6 lines 9-37; "MIB 25 is a mechanism, such as a memory"), wherein memory medium comprises a list of identification information entries (see Stewart; figure 1; "MIB"; col. 6 lines 9-37; "MIB 25 is a mechanism, such as memory, which allows the persistent storage of information needed by network 15 to operate. Examples of such information include a directory of all the elements (APs, mobile units, etc) in the network, the topology of the network, characteristics of connection links, performance, and trend statistics and any information which is of interest in the operation of the network 15", thus identification information) and corresponding network service providers, wherein each entry (see Stewart; col. 3 lines 45-67; "code") indicates a respective network

service provider (see Stewart; col. 3 lines 45-67; “code allows recognition of a user before providing access to system services”) of the plurality of possible network service providers (see Stewart; col. 3 lines 45-67; figure 1; information providers who provide access to system services); wherein the wireless access point (see Stewart; figure 1; “A.P.”, thus a wireless access point of one geographic location from a plurality of access points from other geographic locations) is operable to determine the network service provider (see Stewart; col. 3 lines 45-67; figure 1; information providers) indicated by the identification information (see Stewart; col. 3 lines 45-67; figure 1; “provide access to system services” by “code”) from the plurality of possible network service providers; wherein each of the plurality of possible network service providers is operable to enable particular ones of the one or more computing devices to connect wirelessly to the network; wherein, in determining the network service provider (see Stewart; col. 7 lines 32-38; “Fig. 1 shows one AP 10 and one service and information provider 20 connected to network 15. However, any number of such APs and services and information providers would typically be connected to network 15 to service any number of mobile units”, thus using one network service provider from a plurality of network service providers) for the computing device (i.e. mobile unit), the wireless access point (see Stewart; figure 1; access point) is operable to access the memory medium (see Stewart; figure 1; memory) and use the received identification information (i.e. inquiry request; see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information; col. 4 lines 66-67; col. 5 lines 1-6; “transmission of an inquiry requiring a response”, thus

sending information to request a service from a provider) to determine the network service provider (see Stewart; col. 3 lines 45-63); wherein the wireless access point (see Stewart; figure 1; access point) is operable to provide data (see Stewart; abstract; "provides data") received from the computing device (see Stewart; abstract; "mobile unit") to a destination based on the determined network service provider (see Stewart; abstract; "network communicates with information providers connected to the network and provides data to the mobile unit through the access point corresponding to the location of the mobile unit"); wherein network access (see Stewart; figure 1; access point providing network access to a mobile unit) is provided to the computing device (see Stewart; figure 1; "m.u." mobile unit) through the destination (see Stewart; figure 1; information is provided through provider, thus through a destination).

Regarding claim 45, Stewart discloses he wireless access point (see Stewart; figure 1; "A.P." thus an access point), wherein the wireless access point is useable by subscribers (i.e. mobile users) of each of the plurality of possible service providers (see Stewart; abstract; col. 3 lines 60-63; col. 4 lines 48-55; using a plurality of service providers by a mobile unit from one or more APs).

Regarding claim 46, Stewart discloses the wireless access point (see Stewart; figure 1; "A.P." thus an access point), wherein the determined network service provider bills for access by the computing device (i.e. mobile unit) to the network (see Stewart; col. 3 lines 45-67; "Such and identification code allows recognition of a user before providing access to system services, thereby providing a measure of security and a service billing mechanism").

Regarding claim 47, Stewart discloses the wireless access point (see Stewart; figure 1; “A.P.”, thus an access point), wherein memory medium (see Stewart; figure 1; memory) further comprises associated methods for providing data to the respective plurality of possible network service providers (see Stewart; abstract; “the network communicates with information providers connected to the network and provides data to the mobile unit through the access point”); wherein, in determining the network service provider for the computing device, the wireless access point (see Stewart; figure 1; “A.P.”, thus access point) is operable to access the memory medium (see Stewart; figure 1; memories are accessing by "A.P." 10), use the received network service provider identification information to determine the network service provider (see Stewart; abstract), and use an associated method for providing the data to the determined network service provider (see Stewart; abstract: “the network communicates with information providers connected to the network and provides data to the mobile unit through the access point”).

Regarding claim 48, Stewart discloses the wireless access point (see Stewart; figure 1; “A.P.”, thus an access point), wherein the identification information comprises a System ID (i.e. mobile unit identification code; see Stewart; col. 3 lines 45-67; “identification code” which is generated by a mobile unit equipped with a code generator) of the computing device, wherein the System ID (i.e. SSID) uniquely identifies a network service provider of the plurality of possible network service providers (see Stewart; abstract; col. 3 lines 45-67; "such an identification code allows recognition of a user before providing access to system services”).

Regarding claim 49, Stewart discloses the wireless access point, wherein the wireless access point (see Stewart; figure 1; “A.P.” thus an access point) is operable to provide the data (i.e. communicate) to the destination in a secure manner (see Stewart; col. 3 lines 45-67; “providing a measure of security”).

Regarding claim 50, Stewart discloses the wireless access point (see Stewart; figure 1; “A.P.”, thus a wireless access point), wherein the wireless access point (see Stewart; figure 1; “A.P.”, thus a wireless access point) is at a known location in a geographic region (see Stewart; abstract; “the access points are arranged in known geographic locations"), wherein the wireless access point is operable to provide geographic location information indicating a known geographic location of the computing device (see Stewart; abstract; "When one f the access points detects the presence of the mobile unit, it sends a signal to the network indicating the location of the mobile unit”); wherein network access is selectively provided to the computing device based on the known geographic location of the computing device (see Stewart; abstract; “based on the signal received from the access point, the network communicates with information providers connected to the network and provides data to the mobile unit through the access point corresponding to the location of the mobile unit”).

Regarding claim 57, Stewart discloses the wireless access point (see Stewart; figure 1; “A.P”, thus a wireless access point), wherein said identification information (see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information) comprises a

known geographic location (i.e. latitude, longitude, altitude, and other geographic information; see Stewart; col. 4 lines 8-21; “latitude, longitude, altitude", thus known geographic location) of the portable computing device (i.e. mobile unit; see Stewart; col. 4 lines 8-21; "mobile unit").

Regarding claim 58, Stewart discloses the wireless access point (see Stewart; figure 1; “A.P.” thus a wireless access point), wherein the wireless access point (see Stewart; figure 1; “A.P.” thus a wireless access point) is operable to provide the data to the destination utilizing Layer 2 (i.e. data link layer) forwarding (It is known to one of ordinary skill who has studied communications, in particular networking about how communication is done using the 7 layer model - particularly that data travels through all layers on end nodes and the lower layers on intermediate forwarding nodes. –Layer 2 is the DataLink layer and it would have been know to one of ordinary skill that data travels over the DataLink layer when being forwarded from node to node).

Regarding claim 65, Stewart discloses the wireless access point (see Stewart; figure 1; “A.P.”, thus an access point), wherein the computing device (i.e. mobile unit) is a portable computing device (see Stewart; figure 1; “M.U.” a mobile unit, thus a portable computing device.).

Regarding claim 44, Stewart does not specifically disclose storing a data structure.

Regarding claim 47, Stewart does not specifically disclose storing a data structure.

Regarding claim 44, Pitchaikani discloses storing a data structure (see Pitchaikani; col. 8 lines 22-33; "Each MIB object identifier of MIB object identifiers 206 identifies an object. An object is a data structure for storing values for predetermined types of information. The data structure of an object may include a plurality of data types as well as other objects. Each group identifier of group identifiers 208 identifies a specific object group. An object group includes one or more objects identified in MIB object identifiers 206.")

Regarding claim 47, Pitchaikani discloses storing a data structure (see Pitchaikani; col. 8 lines 22-33; "Each MIB object identifier of MIB object identifiers 206 identifies an object. An object is a data structure for storing values for predetermined types of information. The data structure of an object may include a plurality of data types as well as other objects. Each group identifier of group identifiers 208 identifies a specific object group. An object group includes one or more objects identified in MIB object identifiers 206.")

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by Pitchaikani, thereby allowing to reduce functional and data redundancies (see Pitchaikani col. 2 lines 48-50), supplying agent-to-MIB information (see Pitchaikani; col. 2 lines 50-51), providing a mechanism for supplying a specific type of information about a device (see Pitchaikani; col. 2 lines 53-56), and making it possible for the central database be updated to support devices and agents (see Pitchaikani; col. 2 lines 65-67).

1. Claims 51, 52, 53, and 64 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (U.S. 5,835,061) in combination with Pitchaikani (U.S. 5,684,988), and further in view of P802.1Q/D11.

Regarding claim 51, Stewart discloses the wireless access point (see Stewart; figure 1; “A.P.”, thus an access point).

Regarding claim 52, Stewart discloses the wireless access point (see Stewart; figure 1; “A.P.”, thus an access point).

Regarding claim 53, Stewart discloses the wireless access point (see Stewart; figure 1; “A.P.”, thus an access point).

Regarding claim 64, Stewart discloses the wireless access point (see Stewart; figure 1; “A.P.”, thus an access point).

Regarding claim 51, Stewart does not specifically disclose wherein at least a subset of the identification information entries each indicate at least one VLAN.

Regarding claim 52, Stewart does not specifically disclose wherein each VLAN specifies a network service provider.

Regarding claim 53, Stewart does not specifically disclose wherein the indicated VLAN is used in providing network access.

Regarding claim 64, Stewart does not specifically disclose wherein the wireless access point is operable to provide the data to the destination utilizing the tagged VLAN.

Regarding claim 51, P802.1Q/D11 discloses wherein at least a subset of the identification information (see P802.1Q/D11; page 22; “a tagged fame whose tag header carries both VLAN identification and priority information”, thus identification information) entries each indicate at least one VLAN (see P802.1Q; page 22; “header carries both VLAN identification and priority information”, thus VLAN identification information). Regarding claim 52, P802.1Q/D11 discloses wherein each VLAN (see P802.1Q/D11; page 15; “VLANs”, thus VLAN indicates group membership) specifies a network service provider (i.e. logical group of stations that can communicate as if they were on the same LAN; see P802.1Q/D11; page 15; “VLANs facilitate easy administration of logical groups of stations that can communicate as if they were on the same LAN. They also facilitate easier administration of moves, adds and changes in members of these groups.").

Regarding claim 53, P802.1Q/D11 discloses, wherein the indicated VLAN (see P802.1Q/D11; page 15; “VLANs”, thus VLAN indicates group membership) is used in providing network access (i.e. logical group of stations that can communicate as if they were on the same LAN; see P802.1Q/D11; page 15; “VLANs facilitate easy administration of logical groups of stations that can communicate as if they were on the same LAN. They also facilitate easier administration of moves, adds and changes in members of these groups.").

Regarding claim 64, P802.1Q/D11 discloses wherein the wireless access point is operable to provide the data to the destination utilizing the tagged VLAN (see

P802.1Q/D11; page 15; “VLANs”, thus VLAN indicates group membership amongst which data is communicated)..

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart, as taught by P802.1Q/D11, thereby creating offering the following benefits as stated on page 15 of P802.1Q/D11:

> a) VLANs are supported over all IEEE 802 LAN MAC protocols, and over shared media LANs as well as point-to-point LANs.
> b) VLANs facilitate easy administration of logical groups of stations that can communicate as if they were on the same LAN. They also facilitate easier administration of moves, adds and changes in members of these groups.
> c) Traffic between VLANs is restricted. Bridges forward unicast, multicast and broadcast traffic only on LAN segments that serve the VLAN to which the traffic belongs.
> d) As far as possible, VLANs maintain compatibility with existing bridges and end-stations.
> e) If all Bridge Ports are configured to transmit and receive Untagged Frames (3.14), bridges will work in plug-and-play ISO/IEC 15802-3 mode. End-stations will be able to communicate throughout the Bridged LAN.

8. Claim 54 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (U.S. 5,835,061) in combination with Pitchaikani (U.S. 5,684,988), and further in view of Barkan (U.S. 5,864,667).

Regarding claim 54, Stewart discloses the method (see Stewart; col. 2 lines 36-45; “mobile users communicate with wireless local area networks”, thus providing access to a wireless network system, a method) with identification information (see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information).

Regarding claim 54, Stewart does not specifically disclose wherein said identification information comprises a digital certificate.

Regarding claim 54, Barkan discloses wherein said identification information (i.e. identification package; see Barkan; col. 3 lines 56-67; “identification package”) comprises a digital (see Barkan; col. 3 lines 56-67; “digital”) certificate (see Barkan; col. 3 lines 56-67; “certificate”).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart (U.S. 5,835,061) and P802.1Q/D11, as taught by Barkan, thereby offering alleviating the problem of user identification encountered in various situations in the modern period of widespread use of global communications and information exchange (see Barkan; col. 2 lines 55-67).

9. Claims 55 and 56 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (U.S. 5,835,061) in combination with Pitchaikani (U.S. 5,684,988), and further in view of 802.11D-1997.

Regarding claim 55, Stewart discloses the method (see Stewart; col. 2 lines 36-45; “mobile users communicate with wireless local area networks”, thus providing access to a wireless network system, a method) with identification information (see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information).

Regarding claim 56, Stewart discloses the method (see Stewart; col. 2 lines 36-45; “mobile users communicate with wireless local area networks”, thus providing access to a wireless network system, a method) with identification information (see Stewart; col. 3 lines 45-63; “mobile unit 5 would also be equipped with a code generator which generates an identification code", thus identification information).

Regarding claim 55, Stewart does not specifically discloses wherein said identification information comprises an IEEE 802.11 system identification.

Regarding claim 56, Stewart does not specifically disclose wherein said identification information comprises a media access control (MAC) identification.

Regarding claim 55, 802.11D-1997 discloses wherein said identification information (i.e. PICS proforma information; see 802.11D-1997; page 273; "A.3.1 General structure of the PICS proforma") comprises an IEEE 802.11 (see 802.11D-

1997; page 1; "802.11") system identification (see 802.11D-1997; page 273 "Annex A: Protocol Implementation Conformance Statement (PICS)"; "PICS is a statement of which capabilities and options of the protocol have been implemented", thus identification information identifying the implementation system.).

Regarding claim 56, 802.11D-1997 discloses wherein said identification information (i.e. PICS proforma information; see 802.11D-1997; page 273; "A.3.1 General structure of the PICS proforma") comprises a media access control (MAC) identification (see 802.11D-1997; page 277 “A.4.4 MAC Protocol”; page 277 “A.4.4.1 MAC Protocol Capabilities”; page 280 “A.4.4.2 MAC frames”; page 281 “A.4.4.3 "Frame exchange sequences"; page 281 "A.4.4.4 MAC Addressing functions"; different MAC identification information).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart (U.S. 5,835,061) and P802.1Q/D11, as taught by 802.11D-1997, thereby offering the following PICS benefits as stated on page 272 of 802.11D-1997:

> a) By the protocol implementor, as a checklist to reduce the risk of failure to conform to the standard through oversight;
> b) By the supplier and acquirer, or potential acquirer, of the implementation, as a detailed indication of the capabilities of the implementation, stated relative to the common basis for understanding provided by the standard PICS proforma;
> c) By the user, or potential user, of the implementation, as a basis for initially checking the possibility of interworking with another implementation (note that, while interworking can never be guaranteed, failure to interwork can often be predicted from incompatible PICS proformas)
> d) By a protocol tester, as the basis for selecting private tests against which to assess the claim for conformance of the implementation.

10. Claims 59-63 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (U.S. 5,835,061) in combination with Pitchaikani (U.S. 5,684,988), and further in view of Thaler (INTERNET-DRAFT).

Regarding claim 59, Stewart discloses the wireless access point comprising identification information used in a memory medium comprising a MIB.

Regarding claim 59, Stewart does not specifically disclose wherein the entries (i.e. MIB entries) each indicate at least one tunneling protocol, wherein the access point is operable to provide the data to the destination utilizing a tunneling protocol.

Regarding claim 60, Stewart does not specifically disclose, wherein the tunneling protocol is PPTP.

Regarding claim 60, Stewart does not specifically disclose, wherein the tunneling protocol is IPSEC.

Regarding claim 62, Stewart does not specifically disclose, wherein the tunneling protocol is GRE.

Regarding claim 63, Stewart does not specifically disclose, wherein the tunneling protocol is IP-in-IP.

Regarding claim 59, Thaler discloses entries (see Thaler; “1. Introduction”; “managed objects”) each indicate at least one tunneling protocol (see Thaler; “1. Introduction"; “PPTP”, “IPSEC”, “GRE”, “IP-in-IP”, thus tunneling protocols), wherein the wireless Ethernet is operable to provide the data to the destination utilizing a tunneling

protocol (see Thaler; “3. Overview”; “the tunnel table contains information on the tunnels known to a router”, thus a wireless Ethernet device utilizes a tunneling protocol).

Regarding claim 60, Thaler discloses, wherein the tunneling protocol is PPTP (see Thaler; “1. Introduction”; “PPTP”).

Regarding claim 60, Thaler discloses, wherein the tunneling protocol is IPSEC (see Thaler; “1. Introduction”; “IPSEC”).

Regarding claim 62, Thaler discloses, wherein the tunneling protocol is GRE (see Thaler; “1. Introduction”; “GRE”).

Regarding claim 63, Thaler discloses, wherein the tunneling protocol is IP-in-IP (see Thaler; “1. Introduction”; “IP-in-IP”).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart (U.S. 5,835,061) in combination with Pitchaikani (U.S. 5,684,988), as taught by Thaler (INTERNET-DRAFT), thereby defining a Management Information base (MIB) for use with network management protocols in the internet community, managing tunnels of any type over IPv4 network (see RFC 2667; “1. Abstract”),

11. Claims 66-67 rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart ("U.S. 5,835,061") in view of Pitchaikani ("U.S. 5,684,988"), and further in view of 3Com ("The 3Com VLAN Approach within the ONcore Switching System").

Regarding claim 66. Stewart discloses the wireless access point (see Stewart; figure 1; "A.P.", thus a wireless access point) , wherein the wireless access point (see Stewart; figure 1; "A.P.", thus a wireless access point) is further configured to receive a plurality of different sets of identification information (i.e. identification code) corresponding to the plurality of possible network service providers (see Stewart; col. 7 lines 32-38; "Fig. 1 shows one AP 10 and one service and information provider 20 connected to network 15. However, any number of such APs and services and information providers would typically be connected to network 15 to service any number of mobile units", thus using one network service provider from a plurality of network service providers).

Regarding claim 67, Stewart discloses the wireless access point (see Stewart; figure 1; "A.P.", thus a wireless access point) .

Regarding claim 66, Stewart is silent wherein selected sets of the plurality of different sets of identification information are recognized by the wireless access point, and wherein selected sets of the plurality of different sets of identification information are not recognized by the wireless access point.

Regarding claim 67, Stewart is silent wherein the wireless access point is further configured to select a default network service provider for each received set of identification information that is not recognized by the wireless access point.

Regarding claim 66, 3Com discloses wherein selected sets of the plurality of different sets of identification information are recognized by the wireless access point (see 3COM; page 10 "Auto-VLAN Configuration (VLAN SERVER)"; "Support for autoselect configuration will enable an attached server automatically to assign VLAN membership to a new station"), and wherein selected sets of the plurality of different sets of identification information are not recognized by the wireless access point (see 3Com; pages 10-11 "Auto-VLAN Configuration (VLAN Server)"; "Enhancements will be added to let the network administrator specify the appropriate action the system should take in the event the station's MAC address cannot be determined. Options include … automatically assigning the port to a predefined VLAN, giving the user limited access to network resources").

Regarding claim 67, 3Com discloses wherein the wireless access point is further configured to select a default (i.e. predefined) network service provider for each received set of identification information that is not recognized by the wireless access point (see 3Com; pages 10-11 "Auto-VLAN Configuration (VLAN Server)"; "Enhancements will be added to let the network administrator specify the appropriate action the system should take in the event the station's MAC address cannot be determined. Options include … automatically assigning the port to a predefined VLAN, giving the user limited access to network resources").

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Stewart in view of Pitchaikani and further in view of 3Com, thereby allowing for VLAN information to be propagated (see 3Com; page 11);

and enabling ports to become members of multiple VLANS (see 3Com; page 11); and further supporting multiple VLANs on a single port (see 3Com; page 11).

Conclusion

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADAM DUDA whose telephone number is (571)270-5136. The examiner can normally be reached on Mon. - Fri. 9:30 a.m. - 7:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang B. Yao can be reached on (571) 272 - 3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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